

Harding Lawson Associates

REMEDIAL INVESTIGATION
McKESSON CORPORATION PROPERTY
9005 SORENSEN AVENUE
SANTA FE SPRINGS, CALIFORNIA

HLA Project No. 1113-100

Prepared for

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VOLUME II

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EXECUTIVE SUMMARY

This report presents the results of Harding Lawson Associates' (HLA) Remedial Investigation (RI) conducted at McKesson Corporation's (McKesson) former chemical facility located at 9005 Sorensen Avenue, Santa Fe Springs, California. HLA conducted this work on behalf of McKesson in accordance with Consent Order 89/90-007, issued by the California Department of Health Services (DHS), now the California Environmental Protection Agency - Department of Toxic Substances Control (DTSC). HLA's work was conducted in compliance with the DTSC guidelines and the U.S. Environmental Protection Agency's (EPA), October 1988, "Interim Final Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA." Methods implemented during the RI are described in HLA's workplan entitled "Workplan (Revision 3), Remedial Investigation and Feasibility Study, McKesson Corporation Property, 9005 Sorensen Avenue, Santa Fe Springs, California," (Workplan), dated April 25, 1991.

The facility is located at 9005 Sorensen Avenue, in the City of Santa Fe Springs, Los Angeles County, California. The site is fenced; occupies approximately 4.3 acres in an industrialized area; and is bounded on the east by Sorensen Avenue, on the south by Fontaine Trucking Equipment Company, on the west by a small agricultural field owned by Liquid Air Corporation, and on the north by a Southern Pacific Railroad easement and Angeles Chemical Company (Angeles); a bulk chemical repackaging facility.

McKesson Chemical Company, a former division of McKesson, operated a bulk chemical repackaging facility at the site from 1976 to 1986. During this period of operation, the facility was organized into four areas for the purpose of chemical packaging:

- A solvent repack area,
- A corrosive repack area,
- A hydrogen peroxide repack area, and
- A Freon blending area.

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Forty-four aboveground storage tanks (now demolished) were situated onsite within the four areas of operations. The tanks were contained within 2- to 3-foot-high concrete containment berms and separated by internal dike walls. Twenty-three underground storage tanks (USTs) are presently onsite and predominately located adjacent to the former aboveground solvent tank storage area. Railroad spurs are located along the northern and western boundaries of the site. Loading platforms and underground distribution lines were associated with the offloading of chemicals delivered via the railroad spurs. A drum storage area was used onsite for the storage of hazardous waste.

In September 1985, the DTSC issued a Resource Conservation and Recovery Act (RCRA) Part B Hazardous Waste Facility Permit for the drum-storage area. This area has since been closed under RCRA regulations. The final RCRA closure report was submitted to the DTSC on February 5, 1990 (HLA, 1990a). On June 28, 1990, the DTSC acknowledged that the storage-drum area was officially closed.

At the request of the DTSC, McKesson Environmental Services (MES) conducted three subsurface investigations at the facility during its period of operation. Two studies were undertaken in the aboveground solvent-storage area, and one study was conducted in the corrosive-storage area. Chlorinated solvents were detected in both the soil and groundwater in the aboveground solvent-storage area in these investigations. The corrosive storage area was investigated for USEPA extraction procedure (EP) Toxic compounds; none were detected.

The purpose of the RI was to assess the nature and extent of chemicals of concern in air, soil, surface water, and groundwater associated with the former operations at the McKesson site.

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The RI included the monitoring of ambient meteorological conditions and air quality, drilling of soil borings, drilling and installation of groundwater monitoring wells, cone penetrometer testing (CPT)/HydroPunch groundwater sampling, the collection and analysis of surface and subsurface soil samples, and the collection and analysis of surface water and groundwater samples. All field work and physical testing of soil samples was performed by HLA

geologists, engineers, and technicians under the direct oversight of a registered geologist and/or professional engineer. Analytical testing of air, soil, and water samples was performed by a state-certified laboratory.

HLA's investigation of surface and subsurface soil and vadose zone conditions at the McKesson site was conducted in two phases. The first phase of the investigation was conducted from June to August 1990. Thirty-one soil borings were drilled and sampled during the first phase. Samples were also collected from four surface locations. Following review of the data collected during the first phase of the investigation, a second phase soil and vadose zone investigation was conducted in January and February of 1991, during which an additional ten soil borings were drilled and sampled.

Soil samples collected from borings drilled in the first phase of the investigation in the UST area, the aboveground storage tank area, and the Freon-blending area were analyzed for volatile and semivolatile organic compounds, glycols, and petroleum hydrocarbons. Based on the results from the first-phase borings, the samples collected from the three additional borings in the aboveground solvent-storage area were only analyzed for volatile organic compounds.

Soil samples collected in the corrosive and hydrogen peroxide bermed storage area were only analyzed for pH and selected ions and metals, with the exception of the two samples that were additionally analyzed for volatile and semivolatile organics, glycols, and petroleum hydrocarbons.

The groundwater investigation program consisted of the installation, monitoring, and sampling of a total of 18 onsite groundwater monitoring wells. Two wells were installed in a discontinuous perched-water zone encountered at two locations within the site. Twelve wells were installed in the upper portion of the underlying aquifer zone. Four additional wells were installed in the aquifer, two at an intermediate depth, and two at the bottom of the aquifer, to assess vertical hydraulic and chemical distribution characteristics. The monitoring well program was augmented by the collection of water samples using a

HydroPunch sampling device. HydroPunch samples were collected at five onsite locations and twelve offsite locations.

Onsite groundwater monitoring wells were monitored for depth to groundwater 14 times during the period from June 1990 through April 1991. During the same period, three rounds of groundwater sampling were conducted. Samples collected in the first round of sampling conducted in August 1990 were analyzed using the following EPA methods:

- EPA Method 8240 - Volatile organic compounds,
- EPA Method 8270 - Semi-volatile compounds,
- EPA Method 8015 modified - Glycols,
- EPA Method 418.1 - Petroleum hydrocarbons.
- EPA Method 150.1 - pH,
- EPA Method 9050 - Conductivity,
- EPA Method 160.1 - Total dissolved solids,
- EPA Method 9036 - Sulfate,
- EPA Method 425.1 - Surfactants, and
- EPA Method 300.0/6010 - General minerals, selected metals.

Groundwater samples collected during subsequent sampling rounds were analyzed for volatile organics using EPA Method 8240 with selected samples being analyzed for general minerals and Ph. Hydropunch groundwater samples collected from onsite and offsite locations were analyzed for volatile organics using EPA Method 8240.

Impacts to vadose zone soils and groundwater by chlorinated hydrocarbon compounds were identified in this investigation. The predominant compounds detected in both the soil and groundwater are 1,1,1-trichloroethane (1,1,1-TCA), tetrachloroethene (PCE), trichloroethene (TCE), and methylene chloride (dichloromethane [DCM]). Elevated concentrations of these compounds detected in the soil appear to be limited in their areal extent to the immediate vicinity, including and surrounding the aboveground solvent storage area. Minor impacts to the soil were identified along the subsurface distribution lines connecting the northern railroad spur to the UST area. No significant impacts to vadose zone soils or groundwater

were identified as resulting from activities associated with the storage, handling, or processing of corrosives, hydrogen peroxides, or glycols.

Two groundwater plumes exhibiting elevated concentrations of VOCs were identified during this investigation. An onsite plume, characterized by elevated concentrations of chlorinated hydrocarbons, including 1,1,1-TCA, PCE, TCE, 1,1-dichloroethene (1,1-DCE), and DCM was detected. Maximum concentrations of the major compounds comprising the onsite plume were detected in groundwater samples collected immediately downgradient of the aboveground solvent-storage area. Elevated concentrations extend offsite both downgradient and upgradient of the McKesson site. Even though a significant reduction of the concentration of compounds is observed perpendicular to the plume axis, the lateral extent of the plume has not been completely assessed. Vertically, the elevated concentration of compounds appear to be restricted to the upper part of the aquifer. No observations were made that would indicate elevated concentrations of dissolved organics or non-aqueous phase liquid solvents exist at depth within the aquifer.

An offsite plume, characterized by elevated concentrations of MEK, MIBK, and BTEX, in addition to concentrations of chlorinated hydrocarbons, was identified to the north (upgradient) and west (cross-gradient) of the McKesson site. This offsite plume extends downgradient from the Angeles site, which appears to be a possible source. Based on the compounds detected in the soil and the groundwater at the Angeles site during a preliminary investigation conducted in 1990 by SCS Engineers and the distribution of compounds detected in the groundwater upgradient of the McKesson site, the Angeles site appears to have contributed to the onsite plume identified at the McKesson site.

The observed distribution of compounds in the vadose zone soils appears to result from two transport processes. Within and in the vicinity of the aboveground solvent-storage area, the observed distribution is most probably the result of vertical migration of liquid-phase solvents through the vadose zone accompanied with lateral spreading along zones of high permeability contrasts. Away from the solvent storage tank area and at depths of 40 to 45 feet bgs, the detected concentrations of volatile organics appear to be the result of volatilization of dissolved compounds present in the groundwater.

The observed plume configuration and aquifer test parameters indicated that the transport of chemical compounds in the groundwater is dominated by advection in a downgradient direction. Lateral to the plume axis, transport appears to be dependent primarily on diffusion. Diffusion also appears to control the distribution of compounds observed in the intermediate and deep zones of the aquifer.

A baseline risk assessment conducted by McLaren/ChemRisk concluded that under current conditions, the concentrations of the selected chemicals of concern detected in the site soils do not pose a significant noncancer risk or a significant increased cancer risk to future onsite residential or occupational populations. Risks to offsite populations were not quantitatively assessed. Site-related health risks associated with the chemicals detected in groundwater were not possible to assess because the relative contributions of probable onsite and offsite sources have not been established. The relationship between health effects and groundwater exposure irrespective of onsite versus offsite contribution of chemicals of concern was used to set cleanup levels for groundwater and soil.

Data collected as part of this investigation are sufficient to completely assess the extent of the groundwater plume identified onsite. However, offsite investigation of groundwater conditions is required to assess the downgradient, upgradient, and lateral extent of the plume. Assessment of soil and groundwater conditions upgradient of the McKesson site, including the Angeles site, is necessary to determine the magnitude of offsite contributions to the plumes identified both on and offsite.

The following activities are recommended to complete the remedial investigation of the McKesson site:

- Upon removal of the USTs, collection and analysis of soil samples from beneath the tanks.
- Analyses of soil samples collected during the tank removal activities should be evaluated.
- A report presenting the results of the UST removals and incorporating data generated during this investigation should be prepared as an addendum to the RI Report.

These activities would complete the assessment of vadose zone soils onsite .

A workplan for the downgradient investigation of the groundwater plume detected onsite should be prepared. The scope of work associated with the downgradient investigation should be designed to monitor and assess the downgradient and lateral extent of the onsite plume.

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**APPENDIX A
FIELD PROCEDURES**

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APPENDIX A

FIELD PROCEDURES

- A-1 SOIL BORING/SAMPLE COLLECTION
- A-2 WELL INSTALLATION
- A-3 WELL DEVELOPMENT
- A-4 WELL MONITORING/SAMPLING
- A-5 SURFACE SOIL AND SURFACE-WATER SAMPLING
- A-6 CPT/HYDROPUNCH
- A-7 AQUIFER TEST ANALYSIS

APPENDIX A-1

SOIL BORING/SAMPLE COLLECTION

This appendix presents the procedures used by HLA during drilling and sampling at the McKesson site. The soil classification chart and a key to the test data are summarized on Plate B1. Logs of HLA test borings are presented on Plates B-2 through B-46.

All soil borings were vertically drilled using a truck-mounted CME-75 drill rig equipped with 8-inch-outside-diameter hollow-stem augers. An HLA geologist observed the drilling and logged the borings. Soils were classified in accordance with the Unified Soil Classification System (USCS) presented on Plate B-1.

Soil borings (with the exception of SB-5) were sampled at ground surface and thereafter at 5-foot-depth intervals using a Sprague and Henwood (S&H) split-barrel, stainless-steel sampler (2.4-inch-inside-diameter). Each sampler was lined with three 6-inch-long brass tubes.

Samples were obtained by allowing a 140-pound hammer to fall 30 inches, driving the S&H sampler into native soil. Blow counts presented on the boring logs (Plates B-2 through B-46) have been converted to approximate equivalent standard penetration test N-values.

After retrieving and opening the split barrel, samples were monitored for volatile organic vapors using a photoionization detector (PID) and an organic vapor analyzer (OVA). The PID was equipped with a 10.2 electron-volt lamp and was calibrated each day against an isobutylene (benzene equivalent) standard. The OVA was precalibrated at the manufacturer and did not require daily adjustment.

The S&H tube closest to the tip of the sampler was sealed with Teflon-lined plastic caps, labeled, placed in a Ziploc bag, and stored on ice in a field cooler. Soil in the adjacent tube and the sampler shoe were visually classified according to the USCS. Samples were described with respect to their color, soil type, consistency or relative density, moisture, and other characteristics such as grain sizes, particle shapes, cementation, plasticity, stratification,

the presence of organic matter, and contaminant stain. Soil pH was also measured in the field on selected soil samples. Sample descriptions were recorded on the field log of the boring. The second S&H tube was capped, labeled, and sealed for later use editing the logs. All samples were handled under chain-of-custody protocol.

Soil cuttings generated during drilling were sealed in Department of Transportation (DOT) approved 55-gallon drums. The drums were labeled on the lid and on the side with the well number, date of generation, contents, and drilling interval. All cuttings were handled by HLA's subcontractor, Pacific Environmental Management Corporation (Long Beach, California), and properly disposed of.

All borings were backfilled using a cement-bentonite grout, poured directly into the borehole. The grout was made with 3-percent bentonite powder and Type II Portland cement. The grout was mixed in a trough using a grout pump.

Boring locations were marked by partially driving a nail into the grout and attaching orange flagging for visibility. Approximate X-Y measurements were taken of each boring with respect to permanent site features. Measurements were recorded on the field log of the boring.

Boring SB-22 was abandoned after encountering perched water approximately 2 feet below ground surface (bgs).

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APPENDIX A-2

WELL INSTALLATION

This appendix presents the methods used by HLA to drill and install monitoring wells at the McKesson site. A summary of wells is presented in Table 11. Well completion diagrams are presented on Plates B-2 through B-46. Wellhead completion diagrams are presented on Plates B-47 and B-48.

Three monitoring wells, MW-1 through MW-3, were drilled and installed during Phase I at the locations shown on Plate 5. Monitoring well borings were vertically drilled using a truck-mounted CME-75 drill rig operated by HLA's subcontractor, West Hazmat Drilling Corporation (Anaheim, California). Borings were initially drilled to a depth of 41 to 46 feet bgs using 8-inch-diameter hollow-stem augers. After tripping out the augers, each boring was overreamed using a bucket auger rig equipped with an 18-inch-diameter bucket auger.

A 14-inch-diameter conductor casing was set in each boring and the annulus was backfilled with cement-bentonite grout. Twenty-four hours later, drilling continued with the 10-inch-diameter hollow-stem augers to a depth of approximately 71 feet bgs. An HLA geologist observed the drilling and logged the borings.

Monitoring Wells MW-1 through MW-3 were continuously sampled using a Moss wireline split-core barrel sampler (2.4-inch-inside-diameter). Upon retrieval, the sample core was immediately monitored for organic vapors using a PID and an OVA. The core was placed in tubular plastic sheeting, sealed at both ends with electrical tape, and stored in core boxes. The plastic sheeting was labeled with the date, boring number, and sample depth.

Soil samples were collected at approximately 5-foot intervals for chemical analysis by cutting a portion of the lower 1-foot of the core barrel sample and tightly packing it into a glass Mason jar. The jar was sealed with a Teflon-lined screw cap, labeled, and stored on ice in a field sample cooler. Analytical samples were handled under chain-of-custody protocol.

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Soils were classified in accordance with the USCS using the same procedures as described in Appendix A-1.

Soil cuttings were handled as described in Appendix A-1.

Eight intermediate-depth wells (SB-4, SB-7, SB-10, SB-13, SB-17, SB-20, SB-23, SB-25) and one perched well (SB-32) were drilled and installed during Phase I at the locations shown on Plate 5. Intermediate-depth monitoring well borings were vertically drilled using a truck-mounted CME-75 drill rig equipped with 8- and 10-inch-outside-diameter hollow-stem augers. Drilling was conducted by HLA's subcontractor, West Hazmat Drilling Corporation (Anaheim, California), under the Supervision of an HLA geologist. Soils were sampled, classified, and stored using the procedures as described in Appendix A-1.

One intermediate well and one perched aquifer well (SB-36 and SB-37, respectively) were drilled and sampled during the second phase of work conducted between January 23 and February 7, 1991. Phase II intermediate and perched wells were drilled and sampled using the same methods as described in Appendix A-1.

Two sets of cluster wells were drilled and sampled during Phase II near existing Phase I Wells SB-17 and SB-23. Cluster wells were labeled SB-17A, SB-17B, SB-23A, and SB-23B (Plate 5).

Cluster well borings were initially drilled with a truck-mounted bucket-auger rig equipped with a 15-inch-diameter bucket auger. The bucket-auger boring was terminated at approximately 40 feet bgs in SB-17A and SB-17B and approximately 32 feet bgs in SB-23A and SB-23B. A 10-inch-inside-diameter steel conductor casing was set in each boring, and the annulus was backfilled with cement-bentonite grout. Drilling continued 24 hours later with a truck-mounted Mobil B-61 drill equipped with a 9-7/8 inch diameter rotary-drill bit. Drilling was conducted using direct mud-rotary methods. All bucket-auger and mud-rotary drilling was carried out by HLA's subcontractor H-F Drilling, Inc. (Fullerton, California). An HLA geologist observed the drilling and logged the borings.

Cluster Wells SB-17A and SB-23A were continuously sampled starting at the bottom of the bucket-auger borings using a Christensen 94 mm wireline sampling system. The sample core was handled as described above. Soils were classified according to the USCS using the same procedures as described in Appendix A-1.

All mud-rotary drill cuttings and drilling muds were contained in waste bins and handled by HLA's subcontractor, Pacific Environmental Management Corporation (Long Beach, California).

Groundwater was encountered at approximately 44 feet bgs at the eastern end of the site and at approximately 49 feet bgs at the western end. The first-phase wells (MW-1 through MW-3) were set approximately 20 feet below groundwater. Phase I intermediate-depth wells were set approximately 15 feet below groundwater. Perched aquifer wells were set at the base of first encountered groundwater. Phase II cluster wells SB-17A and SB-23A were set at the bottom of the aquifer (approximately 117 and 128 feet bgs, respectively). Cluster wells SB-17B and SB-23B were set at an intermediate depth within the aquifer (90 and 95 feet bgs, respectively).

All Phases I and II perched, intermediate, and deep wells were cased with 4-inch-diameter, flush-threaded, Schedule 40 PVC blank casing and well screen (0.02 inch slots). The base of each well was sealed with a PVC flush-threaded bottom cap. The top of each well was sealed with an expandable locking well cap. Cluster wells utilized stainless-steel screen. All well casing and screen was steam-cleaned with a hot-water washer prior to installation.

The annular space between the borehole wall and well screen was backfilled with Monterey No. 3 sand from the bottom of the borehole to approximately 3.0 feet above the top of the slotted casing. A 3- to 4-foot-thick bentonite pellet seal was placed above the sand pack. The remainder of the annulus was filled with a cement-bentonite grout (3 percent bentonite by weight). All annulus materials were slowly poured down the annulus. The height of the sand pack and bentonite pellets were periodically measured using a weighted cloth tape. Well completion details are presented on Plates B-2 through B-46.

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Wells SB-23 and SB-37 were completed above grade, as illustrated on Plate B-47. All other wells were completed below grade, using a watertight, bolted well cover. The wellhead covers extend approximately 1 inch above the surrounding grade to allow for drainage of surface water away from the wellhead. Subsurface wellhead completion details are presented on Plate B-48.

An aluminum identification tag was placed inside each bolted well cover. The tag documented the well number, date of installation, diameter, depth, screen interval, and slot size. The top of each casing was marked on the north side for use as a monitoring and surveying reference point.

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APPENDIX A-3 WELL DEVELOPMENT

On July 26 through 30, 1990, Wells MW-1 through MW-3, SB-4, SB-7, SB-10, SB-13, SB-17, SB-20, SB-23, SB-25, and SB-32 were developed by HLA's subcontractor West Hazmat Drilling Corporation (Anaheim, California) under the supervision of an HLA geologist.

Total open well depths and depths to water were measured in all wells prior to beginning development. Measurements were obtained using a Solinst brand electric well sounder checked against a cloth tape and rule. Monitoring data were used to calculate four borehole volumes (the amount of water contained in the borehole multiplied four times) in each well as a minimum amount of water to be purged. Purge volumes were calculated as follows:

$$(1 \text{ annulus volume} + 1 \text{ well casing volume}) \times 4 = 4 \text{ borehole volumes}$$

$$1 \text{ annulus volume} = (3.46 \text{ gal/mft}) (\text{Total Well Depth} - \text{Water Depth}) (0.70)$$

assuming:

$$\text{Borehole diameter} = 10.25 \text{ inches}$$

$$\text{Casing diameter} = 4 \text{ inches}$$

$$30\% \text{ pore space in the sand pack}$$

$$1 \text{ casing volume} = (\text{Total Well Depth} - \text{Water Depth}) (4)^2 (0.048 \text{ gal/ft}^3)$$

Wells were developed using a 4-inch-diameter rubber-seal swab tool, a 4-inch by 6-foot stainless-steel bailer, and a 10-gallon-per-minute submersible pump. With the exception of SB-32, each well was surged with the swab tool for approximately 5 minutes and then bailed until approximately 55 gallons were removed. Surging was repeated a second time for approximately 5 minutes, and the wells were bailed again of approximately 30 gallons. Development was completed by installing a submersible pump approximately 5 feet from the bottom and pumping at 10 gallons per minute. Approximately 385 total gallons were removed from each well. Discharge rates were measured by directing discharged water into a 5-gallon bucket and tracking the time required to fill the bucket. The rates were converted to gallons per minute and recorded on the well development form. Water levels were remeasured immediately after removing the pump to assess the effects of pumping on the

aquifer. Purged water was stored in Department of Transportation (DOT)-approved 55-gallon drums.

Electrical conductivity, pH, and water temperature were measured at regular intervals during development to assess general groundwater quality and parameter stabilization. Water turbidity and color were also noted. All data were recorded on well development forms. Well development forms are presented in Appendix F.

Phase II wells were developed between February 1 and 9, 1991, by HLA's subcontractor H-F Drilling, Inc. (Fullerton, California), under the supervision of an HLA geologist.

Well SB-36 was developed using the same procedures as described above. Well SB-37 went dry after purging approximately 1 gallon and never recovered during the monitoring period.

Wells SB-17A, SB-17B, SB-23A, and SB-23B were treated with sodium acid pyrophosphate (SAPP) prior to surging and pumping. The SAPP was used as a silt and clay deflocculant and was poured as a solution directly into the wells. The wells were then surged for approximately 45 minutes to mix the solution. Wells SB-23A and MK-SB-23B were allowed to set approximately one hour before they were bailed and pumped. Well SB-17A and SB-17B were treated, surged, and allowed to set for approximately two days before bailing and pumping. Development of all cluster wells was completed using a 4-inch-diameter stainless-steel submersible pump. Discharge rates and water parameters were handled the same as for Phase I wells. Discharge water was stored in waste bins onsite. All purge, development, and rinsate water was properly manifested and disposed of by HLA's subcontractor, Pacific Environmental Management Corporation (Long Beach, California).

MCK0002587

APPENDIX A-4

WELL MONITORING/SAMPLING

Wells at the McKesson site were sampled by HLA geologists in August and October 1990 and February 1991.

Static water levels were measured in all wells prior to sampling. Monitoring data were used to calculate four well casing volumes (the volume of water contained in one well casing multiplied by four for each well as a minimum amount to be purged).

Each well was purged using a 4-inch-diameter stainless-steel submersible pump. The pump was lowered to approximately 2 feet above the base of the well before pumping. The rate of discharge was measured using a 5-gallon bucket and a stopwatch. Water was pumped directly into DOT-approved 55-gallon drums which were then sealed and labeled. All purged rinsate water was properly manifested and properly disposed of by HLA's subcontractor, Pacific Environmental Management Corporation (Long Beach, California).

Electrical conductivity, pH, and water temperature were monitored at regular intervals while purging each well. All meters were calibrated at the start of each day of sampling. Electrical conductivity was calibrated to a 700 mmhos standard; pH was calibrated in pH-7 and pH-10 standard solutions. Well purging and sampling data are presented in Appendix G.

Well purging was complete when four well volumes had been removed. Well SB-32 consistently went dry before four well volumes could be removed. In this case, the water level was allowed to recover to 80 percent of the static water level, measured prior to sampling, before the well was sampled. Well SB-37 was purged dry during development and never recovered during the sampling period.

Groundwater samples were collected using a clean, 1-inch-diameter by 3-foot-long, stainless-steel bailer. Water samples were decanted from the bailer into clean, prelabeled sample containers. The containers were then sealed in plastic bags and placed on ice in a field

cooler. All water sampling equipment was washed with Liquinox solution, rinsed with potable water, and then rinsed with distilled water prior to sampling each well.

Duplicate samples were taken of selected wells to evaluate the precision of data received from the laboratory. The duplicate samples were collected in series from the same well using the same sampling procedure. Both original and duplicate samples were submitted "blind" to the laboratory and analyzed for the same parameters.

Blank samples were taken in the field to evaluate whether field procedures were providing a means of contamination to groundwater samples. One equipment blank was taken on each day of sampling by decanting distilled water from a decontaminated bailer into laboratory-prepared sample containers. One field blank was prepared at the beginning of each day of sampling by decanting distilled water directly into laboratory-prepared sample containers. The field blank was placed in the sample cooler at the beginning of the day and kept with the samples until they reached the lab. All blank samples were submitted "blind" to the laboratory.

All samples and blanks were submitted under chain-of-custody protocol.

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APPENDIX A-5
SURFACE SOIL AND SURFACE-WATER SAMPLING

On July 17 and 18, 1990, eight surface-soil samples were collected by an HLA geologist from four different source areas (SS-01 to SS-04). All samples were obtained from the unlined drainage ditch near the run-off control sump discharge to the north of the site. Samples were collected at approximately 0.5 and 1.0 feet bgs using a hand auger. Samples were monitored for volatile organic vapors using a PID and OVA, and for pH. Soil samples were tightly packed into glass Mason jars and sealed with a Teflon-lined screw cap.

On June 23, 1990, two sets of surface-water samples were collected by an HLA geologist from two source areas (SW-01 and SW-02) along the unlined drainage channel to the northwest of the site (Plate 5). Samples were collected by submersing two volatile organic analysis (VOA) vials and two one-liter amber glass jars. Electrical conductivity, pH, and temperature readings were taken.

MCK0002590

APPENDIX A-6

CPT/HYDROPUNCH

This appendix presents the procedures used during cone penetrometer testing (CPT) and Hydropunch groundwater sampling. Logs of CPT soundings are presented on Plates D-1 through D-18.

Soundings CPT-1 through CPT-18 were driven at the locations shown on Plate 6. CPT borings were driven using a 20-ton CPT rig equipped with a 1-1/2 inch diameter friction cone and push rods. The friction cone provided a detailed continuous record of soils encountered beneath the site. CPT probing was performed by HLA's subcontractor, Earth Technology Corporation (Huntington Beach, California), under the direction of an HLA geologist.

CPT-1 was driven approximately 10 feet from MW-1 to provide correlation of the CPT data with recovered soil types. CPT-1 was driven to approximately 60 feet bgs. All other CPT probes were driven to approximately 55 feet bgs. Computer printouts of soil behavior types were provided in the field by the subcontractor.

The CPT friction cone and push rods were steam-cleaned between each test location. Steam-cleaning rinsate was retained in DOT-approved 55-gallon drums.

After the friction cone and push rods were removed from the borings, a Hydropunch sampler was installed inside each CPT probe hole to collect groundwater samples. Refusal was encountered in CPT-5 at a depth of approximately 55 feet due to dense formation; consequently, no sample was obtained from CPT-5.

Groundwater samples were obtained by retrieving the Hydropunch sampler and transferring the sample into two laboratory-supplied, 40 ml VOA vials using a Teflon stopcock and plastic tubing. Sample vials were labeled, sealed in plastic bags, and stored on ice in a field sample cooler. All samples were handled under chain-of-custody protocol.

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The Hydropunch sampler and push rods were steam-cleaned between each boring. All Teflon valves and plastic tubing related to sampling from the Hydropunch were discarded between use at each CPT probe hole. Steam-cleaning rinsate was retained in DOT-approved 55-gallon drums.

CPT probe holes were backfilled by pumping cement-bentonite grout through a tremie pipe. The abandoned CPT probe holes were then marked and labeled with spray paint for ease of location. Each location was measured in the field to a permanent feature on the site.

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APPENDIX A-7

AQUIFER TEST ANALYSIS

This appendix presents the field methods used to evaluate aquifer characteristics at the former McKesson Chemical Facility. Slug test and pumpout data are presented in Tables H-1 through H-20. Hydrographs of pumpout data are presented in Appendix H.

Point-specific aquifer tests (slug tests) were conducted on MW-1 through MW-3, SB-4, SB-7, SB-13, SB-17, and SB-32 on August 15 and 16, 1990. Pumpout tests were conducted on Phase II cluster wells on February 13 and 14, 1991.

Slug tests were conducted by two HLA geologists using a 3-1/2-inch-outside-diameter PVC mandrel filled with inert Silica sand. Static water levels were first measured using a Solinst electric well sounder calibrated to a cloth tape and rule. An electronic pressure transducer was then set approximately one foot above the bottom of the well. The pressure transducer was connected to a Hermit data logger (In-Situ Inc., Laramie, Wyoming) which would record changes in water level in the well. The test was begun when the PVC mandrel was lowered into the well and completely submerged under water. The data logger was started immediately before the slug entered the water. During the test, water levels were simultaneously monitored with the electric well sounder to confirm the data. The test was repeated when the mandrel was removed.

Data stored on the data logger were printed out in the field to provide a backup copy of the test. The data were later transferred from the data logger to two computer disks, one primary, and one backup file.

The electronic pressure transducers, the electric well sounder, and the PVC mandrel were decontaminated using a Liquinox solution wash, a potable water rinse, and a distilled water rinse between each well. The rope connected to the mandrel was changed between each well.

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Pumpout tests were conducted by two HLA geologists on SB-17, SB-17A, MK-SB-17B, SB-23, SB-23A, and SB-23B. Prior to the test, static water levels were measured in each well using an electric well sounder calibrated to a cloth tape and rule. A 4-inch-diameter stainless-steel submersible pump was then set in one cluster well, approximately 1 foot above the bottom of the well.

An electronic pressure transducer was set approximately 1 foot above the submersible pump. Transducers were also set approximately 1 foot above the bottom of the wells in the other two cluster wells. Transducers were plugged into data loggers. The test was begun when the submersible pump and the data loggers were simultaneously turned on. During the test, water levels were monitored with the electric well sounder to confirm the data. After a specified volume had been removed, the data loggers were stopped, reset, and restarted. The pump was turned off at the same time that the data loggers were turned on in order to gather aquifer recovery data. The test was repeated with the pump in each cluster well.
















Data transfer was handled as described above.

Equipment decontamination was handled as described above.

MCK0002594

APPENDIX B
BORING LOGS

MCK0002596

MAJOR DIVISIONS					TYPICAL NAMES
COARSE-GRAINED SOILS MORE THAN HALF IS LARGER THAN No. 200 SIEVE	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN No. 4 SIEVE SIZE	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW		WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES
			GP		POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES
		GRAVELS WITH OVER 12% FINES	GM		SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
			GC		CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES
	SANDS MORE THAN HALF COARSE FRACTION IS SMALLER THAN No. 4 SIEVE SIZE	CLEAN SANDS WITH LITTLE OR NO FINES	SW		WELL-GRADED SANDS, GRAVELLY SANDS
			SP		POORLY GRADED SANDS, GRAVELLY SANDS
		SANDS WITH OVER 12% FINES	SM		SILTY SANDS, POORLY GRADED SAND-SILT MIXTURES
			SC		CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES
FINE-GRAINED SOILS MORE THAN HALF IS SMALLER THAN No. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT 50% OR LESS		ML		INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, OR CLAYEY SILTS WITH SLIGHT PLASTICITY
			CL		INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
			OL		ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50%		MH		INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
			CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH		ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			Pt		PEAT AND OTHER HIGHLY ORGANIC SOILS

- - "Undisturbed" S&H or Shelby tube sample
- Σ - Bulk or classification sample
- Σ - Standard Penetration Test sample
- - No sample recovered
- - Core sample
- Blows/ft - Blows required to drive sampler 12 inches with a 140-pound hammer falling 30 inches. Blow counts for S&H samplers are converted to approximate "equivalent" SPT N values (N = 0.5 X S&H blows per foot)

HC Odor - Hydrocarbon Odor

- No - No Odor
- Lo - Slight Odor
- Md - Moderate Odor
- Sg - Strong Odor

- PID - Photoionization Detector reading (10.2-electron-volt lamp, calibrated using an isobutylene standard)
- OVA - Organic Vapor Analyzer (flame ionization detector) calibrated using a methane standard
- * - Sample submitted for chemical analysis
- ** - Based on HLA Temporary Bench Mark (TBM) shown on Plate 2. Assumed elevation = 100.00'

KEY TO BORING LOG

MCK0002597



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Engineering and
Environmental Services

SOIL CLASSIFICATION CHART
& KEY TO BORING LOGS
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B1

DRAWN
HK

JOB NUMBER
17333.168.11

APPROVED
TAK

DATE
1/92

REV'S

DATE

6-12/D:

Top of Casing 148.52 ft

(See Plate B48 for
Wellhead
Construction)

18" dia. Borehole

14" dia. Steel
Conductor Casing

4" dia. Blank
PVC Casing

Bentonite-Cement
Grout

Bentonite Pellet Seal

PID

OVA

Soil pH

Depth ft
Sample

Equipment

8 & 10" Hollow Auger

Elevation

149.1 ft

Date

6/14/90

3" ASPHALTIC CONCRETE

BROWN SANDY SILT (ML)

moist, with trace of gravel and some clay

GRAY GRAVELLY SAND (SP)

moist, fine to coarse grained

RED-BROWN SILT (ML)

moist, with some clay and trace of sand and gravel
color change to dark brown

decreasing clay and gravel content
increasing sand content

ORANGE-BROWN SANDY CLAY (CL)

moist, with some silt

increasing sand content, trace of gravel

BROWN CLAYEY SAND (SC)

moist, fine to medium grained with few gravel

ORANGE-BROWN SAND (SP)

moist, fine to medium grained with trace of
coarse-grained sand and some silt

becoming coarse-grained, color change to light
brown

with trace of gravel, increasing silt content
BROWN SILTY SAND (SM)

moist, very fine to fine grained with some clay,
micaceous

increasing clay content

BROWN CLAY (CL)

moist, with minor fine-grained sand

increasing sand content

with trace of sand, some silt

BROWN SILTY SAND (SM)

moist, fine grained, micaceous

trace of medium grained

BROWN SANDY CLAY (CL)

moist, fine-grained sand with trace of silt

color change to orange-brown
decreasing sand content

color change to brown

increasing sand content

color change to mottled brown and orange
decreasing sand content

MCK0002598



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Engineering and Environmental Services

Log of Boring MK-MW-01 (sheet 1 of 2)

McKesson Corporation Property
Santa Fe Springs, California

PLATE

B2

DRAWN

HK

JOB NUMBER

17333, 168.11

APPROVED

TAK

DATE

1/92

REVISED

DATE

0, 2/D:

Top of Casing 148.52 ft

Equipment 8 & 10" Hollow Auger

Elevation 149.1 ft Date 6/14/90

10" dia. Borehole

Filter Sand
(No. 3 Monterey)

4" dia. Slotted PVC
Casing (0.020" Slots)

Threaded Cap

PID

OVA

Soil pH

Depth ft
Sample

0.0

0.0

7.65 *

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

9.06

0.0

0.0

9.26

0.0

0.0

9.37

0.0

0.0

9.31

40

45

50

55

60

65

70

75

80

BROWN SILT (ML)
moist, with some fine-grained sand, micaceous
BROWN SANDY CLAY (CL)
moist, fine-grained sand with some silt

MOTTLED BROWN AND ORANGE SAND (SP)
very moist to wet, fine grained

water level measured on 8/15/90

fine to medium grained
saturated
color change to brown

with some silt, micaceous
with few gravel

medium grained
fine to medium grained
fine grained, increasing silt content

decreasing silt content
medium grained
increasing silt content
fine grained
fine to medium grained

Eight-inch-diameter boring terminated at 68 feet.
Groundwater encountered at 50 feet during drilling.
Boring converted to ground-water monitoring well
on 6/15/90.

Note: Eight-inch-diameter boring was overreamed
with ten-inch-diameter augers to a total depth of
72 feet. Based on field observations, interpreted
lithology in the overreamed interval is similar to
that at last sampled depth.

MCK0002599



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Engineering and Environmental Services

Log of Boring MK-MW-01 (sheet 2 of 2)

McKesson Corporation Property
Santa Fe Springs, California

PLATE

B2a

DRAWN

HK

JOB NUMBER

17333, 168.11

APPROVED

TAK

DATE

1/92

REVISED

DATE

6 2/D:

Top of Casing 147.28 ft

Equipment 8 & 10" Hollow Auger

Elevation 147.7 ft

Date 6/14/90

(See Plate B48 for
Wellhead
Construction)

18" dia. Borehole

14" dia. Steel
Conductor Casing

4" dia Blank
PVC Casing

Bentonite-Cement
Grout

Bentonite Pellet Seal

PTD

OVA

Soil pH

Depth ft
Sample

0.0 0.0 8.77

0.0 0.0 8.70

0.0 0.0 8.58

0.0 0.0

0.0 0.0 9.62 *

0.0 0.0 9.01

0.0 0.0 8.11

0.0 0.0 8.19

2.5" ASPHALTIC CONCRETE

DARK BROWN CLAY (CL)

moist, with some sand and silt

RED-BROWN SILTY SAND (SM)

moist, fine grained

DARK BROWN CLAY (CL)

moist, with some silt and minor sand

increasing silt content

color change to brown

BROWN SILT (ML)

moist, with some fine-grained sand and clay,
micaceous

with trace of medium-grained sand

color change to orange-brown

bedding plane parting at 1/16-inch spacing

with trace of gravel

BROWN SAND (SP)

moist, very fine to fine grained with minor silt

increasing silt content

micaceous

color change to gray-brown, medium to coarse

grained, with some rounded to subrounded gravel
up to 1/4-inch diameter

BROWN SILTY SAND (SM)

moist, very fine to fine grained

color change to light brown

with some clay

BROWN SAND (SP)

moist, very fine to fine grained with minor silt

BROWN SILTY SAND (SM)

moist, fine grained

BROWN SILT (ML)

moist, with some fine-grained sand

BROWN SILTY SAND (SM)

moist, very fine to fine grained with trace of clay,
micaceous

BROWN LEAN CLAY WITH SAND (CL)

moist, fine- to medium-grained sand with trace of
gravel

MCK0002600



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Log of Boring MK-MW-02 (sheet 1 of 2)

McKesson Corporation Property
Santa Fe Springs, California

B3

DRAWN

HK

JOB NUMBER

17333, 168.11

APPROVED

TAK

DATE

1/92

REV. SEC.

DATE

0.2/D:

Top of Casing 147.28 ft

Equipment 8 & 10" Hollow Auger

Elevation 147.7 ft Date 6/14/90

10" dia. Borehole

Filter Sand
(No. 3 Monterey)

4" dia. Slotted PVC
Casing (0.020" Slots)

Threaded Cap

PID

OVA

Soil pH

Depth ft
Sample

0.0 0.0 8.43

0.0 0.0 8.52 *

0.0 0.0 8.91

0.0 0.0 9.32

0.0 19.0 8.26

0.0 0.0 9.41

0.4 0.0 9.27

increasing sand content
BROWN SILTY SAND (SM)
moist, fine grained with trace of clay
decreasing silt content

▽ water level measured on 8/15/90
increasing silt content

DARK BROWN SAND (SP)
very moist, very fine to fine grained with minor
silt, micaceous

saturated

color change to brown

increasing silt content

decreasing silt content, fine to medium grained

Eight-inch-diameter boring terminated at 68 feet.
Groundwater encountered at 52 feet during drilling.
Boring converted to ground-water monitoring well
on 6/15/90.

Note: Eight-inch-diameter boring was overreamed
with ten-inch-diameter augers to a total depth of
72 feet. Based on field observations, interpreted
lithology in the overreamed interval is similar to
that at last sampled depth.

MCK0002601



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Log of Boring MK-MW-02 (sheet 2 of 2)

McKesson Corporation Property
Santa Fe Springs, California

B3a

DRAWN

JOB NUMBER

APPROVED

DATE

REVISED

DATE

HK

17333, 168.11

TAK

1/92

0.2/D:

Top of Casing 149.03 ft

(See Plate B48 for Wellhead Construction)

18" dia. Borehole

14" dia. Steel Conductor Casing

4" dia. Blank PVC Casing

Bentonite-Cement Grout

Bentonite Pellet Seal

PID

OVA

Soil pH

Depth ft
Sample

Equipment 8 & 10" Hollow Auger

Elevation 149.7 ft Date 6/15/90

4" ASPHALTIC CONCRETE

BROWN SILTY SAND (SM)
moist, fine to medium grained

color change to red-brown

color change to brown

decreasing silt content

with trace of coarse-grained sand and few gravel

color change to red-brown

increasing gravel content
with minor clay

ORANGE-BROWN SAND (SP)

moist, fine to coarse grained with trace of gravel
and minor silt

medium grained

increasing gravel content

BROWN SILTY SAND (SM)

moist, fine grained with trace of gravel

BROWN CLAYEY SAND (SC)

moist, fine grained

BROWN SILTY SAND (SM)

moist, fine grained, micaceous

increasing silt content

RED-BROWN SANDY CLAY (CL)

moist, fine grained with some coarse-grained sand
and trace of gravel

BROWN SILTY SAND (SM)

MCK0002602

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Log of Boring MK-MW-03 (sheet 1 of 2)

McKesson Corporation Property

Santa Fe Springs, California

PLATE

B4

DRAWN

HK

JOB NUMBER

17333, 168.11

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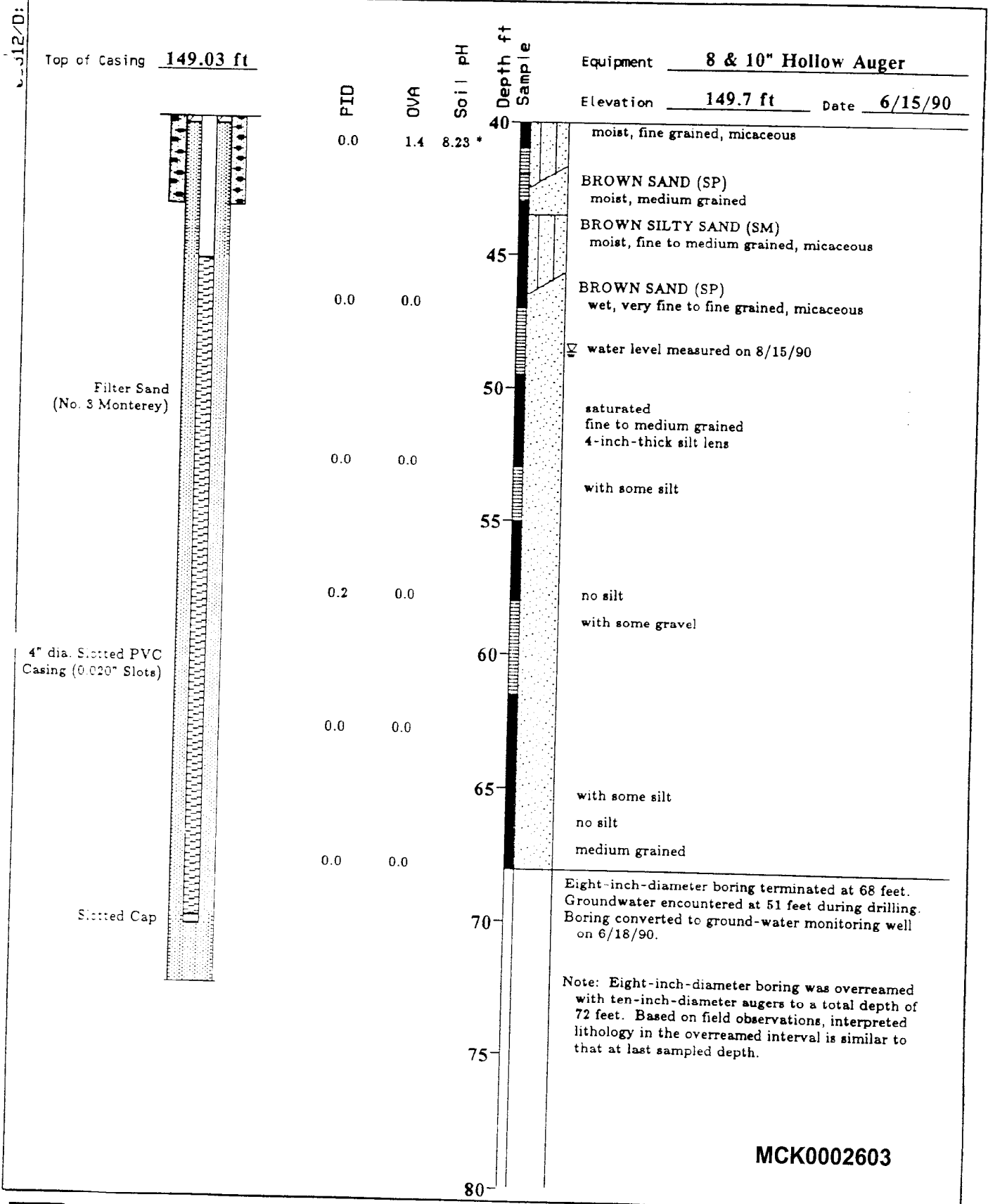
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DATE

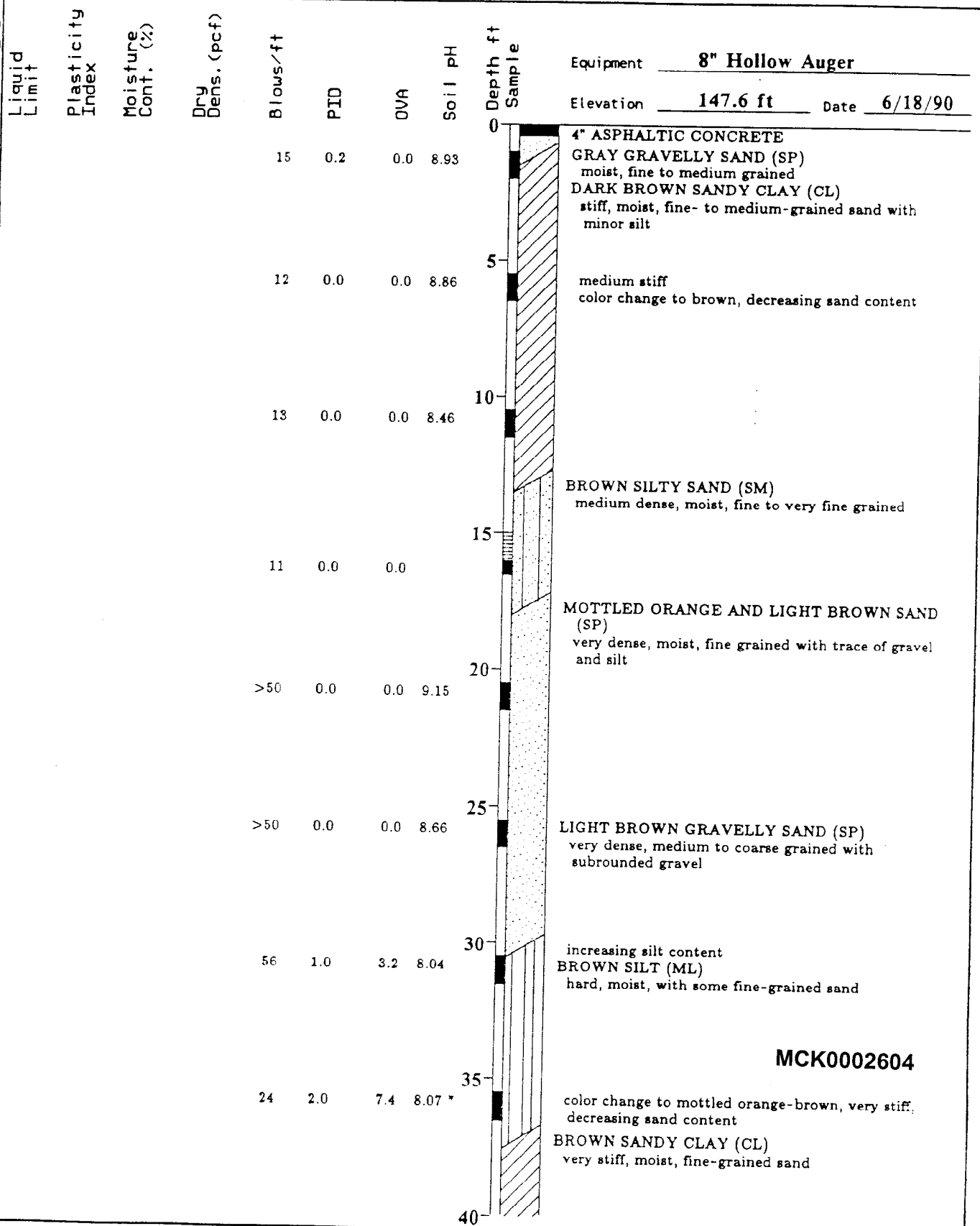
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REVISED

DATE



00. 2/D:



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Log of Boring MK-SB-01 (sheet 1 of 2)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B5

DRAWN HK	JOB NUMBER 17333, 168.11	APPROVED TAK	DATE 1/92	REVISED	DATE
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6/12/01

Liquid Limit	Plasticity Index	Moisture Cont. (%)	Dry Dens. (pcf)	Blows/ft	PID	OVA	Soil pH	Depth ft	Sample	Equipment	Elevation	Date
				41	1.0	6.0	8.36	40		8" Hollow Auger	147.6 ft	6/18/90
								45		Boring terminated at 45 feet. Groundwater encountered at 45 feet during drilling. Boring backfilled with bentonite-cement grout on 6/19/90.		
								50				
								55				
								60				
								65				
								70				
								75				
								80				

MCK0002605

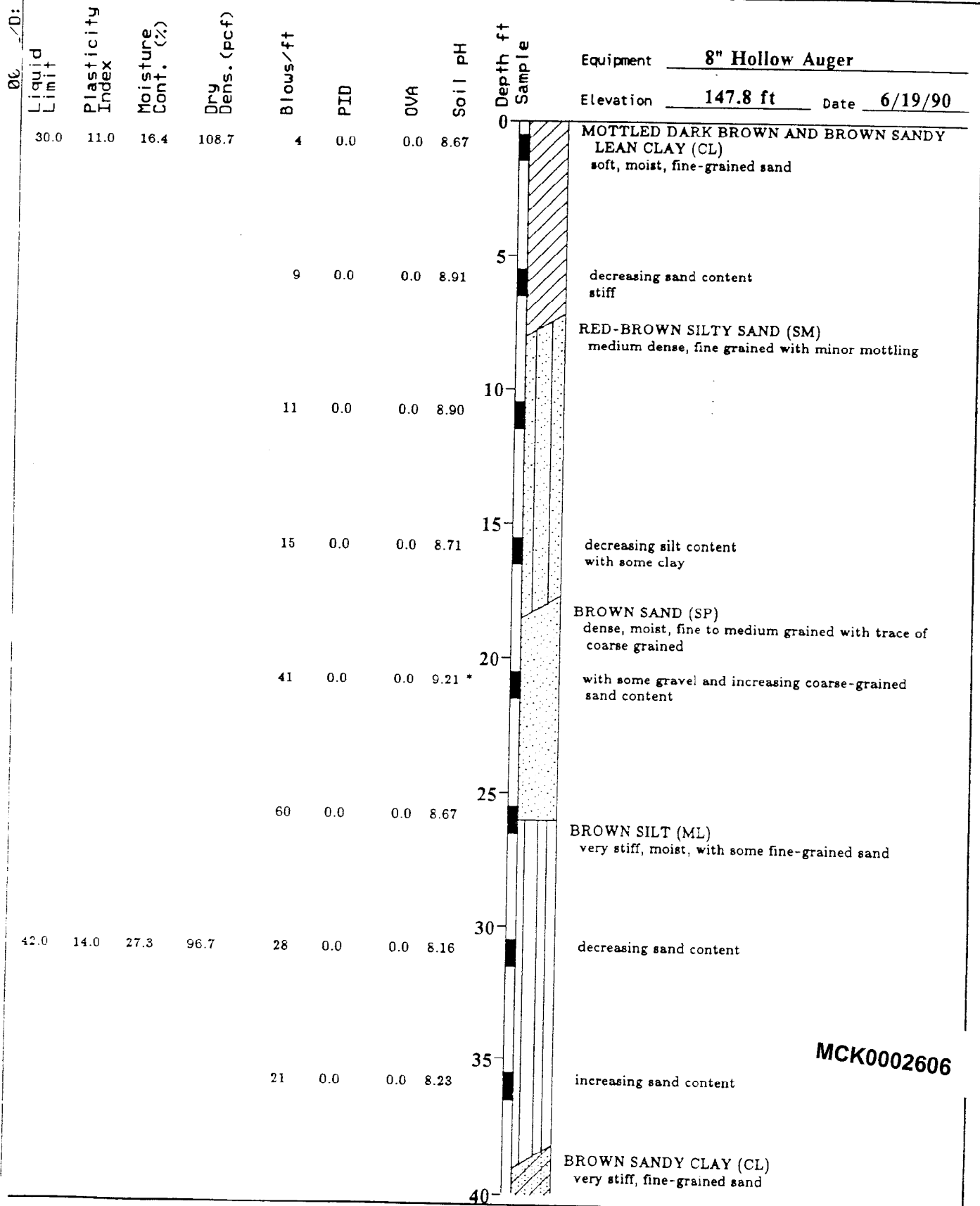


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Log of Boring MK-SB-01 (sheet 2 of 2)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B5a



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Log of Boring MK-SB-02 (sheet 1 of 2)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B6

0.0 12/0:

Liquid Limit	Plasticity Index	Moisture Cont. (%)	Dry Dens. (pcf)	Blows/ft	PID	OVA	Soil pH	Depth ft	Sample	Equipment	Elevation	Date	
				19	0.0	0.0	8.39	40		8" Hollow Auger	147.8 ft	6/19/90	
										<p>Boring terminated at 41.5 feet. Groundwater not encountered during drilling. Approximately two hours after completion of drilling, groundwater level was measured at approximately 35 feet below ground surface. Boring backfilled with bentonite-cement grout on 6/19/90.</p>			
													45
													50
													55
													60
													65
													70
													75
													80

MCK0002607



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Log of Boring MK-SB-02 (sheet 2 of 2)

McKesson Corporation Property
Santa Fe Springs, California

B6a

0. 2/D:

Liquid Limit	Plasticity Index	Moisture Cont. (%)	Dry Dens. (pcf)	Blows/ft	PID	OVA	Soil pH	Depth ft Sample	Equipment	Elevation	Date
								0	8" Hollow Auger	147.2 ft	7/6/90
								0	10" CONCRETE SLAB		
								5	BROWN SILTY SAND (SM) loose, moist, very fine grained, micaceous		
				7		26.0	7.44	10			
								10	color change to mottled red-brown and brown		
				9		4.8	7.26	15			
								15	medium dense BROWN SAND (SP) medium dense, moist, very fine to fine grained color change to red-brown		
				14		3.0	7.53	20			
								20	color change to brown, dense, with trace of medium grained and some gravel		
				38		78.0	7.72 *	25			
								25	LIGHT BROWN SILTY SAND (SM) dense, moist, very fine to fine grained with trace of medium grained, micaceous		
				45		68.0	7.33	30			
								30	color change to mottled red-brown and brown		
				21		200.0	7.25 *	35			
								35	ORANGE-BROWN SANDY CLAY (CL) hard, moist, very fine-grained sand with trace of medium-grained sand, micaceous		
				30		30.0	7.14	40			

MCK0002608



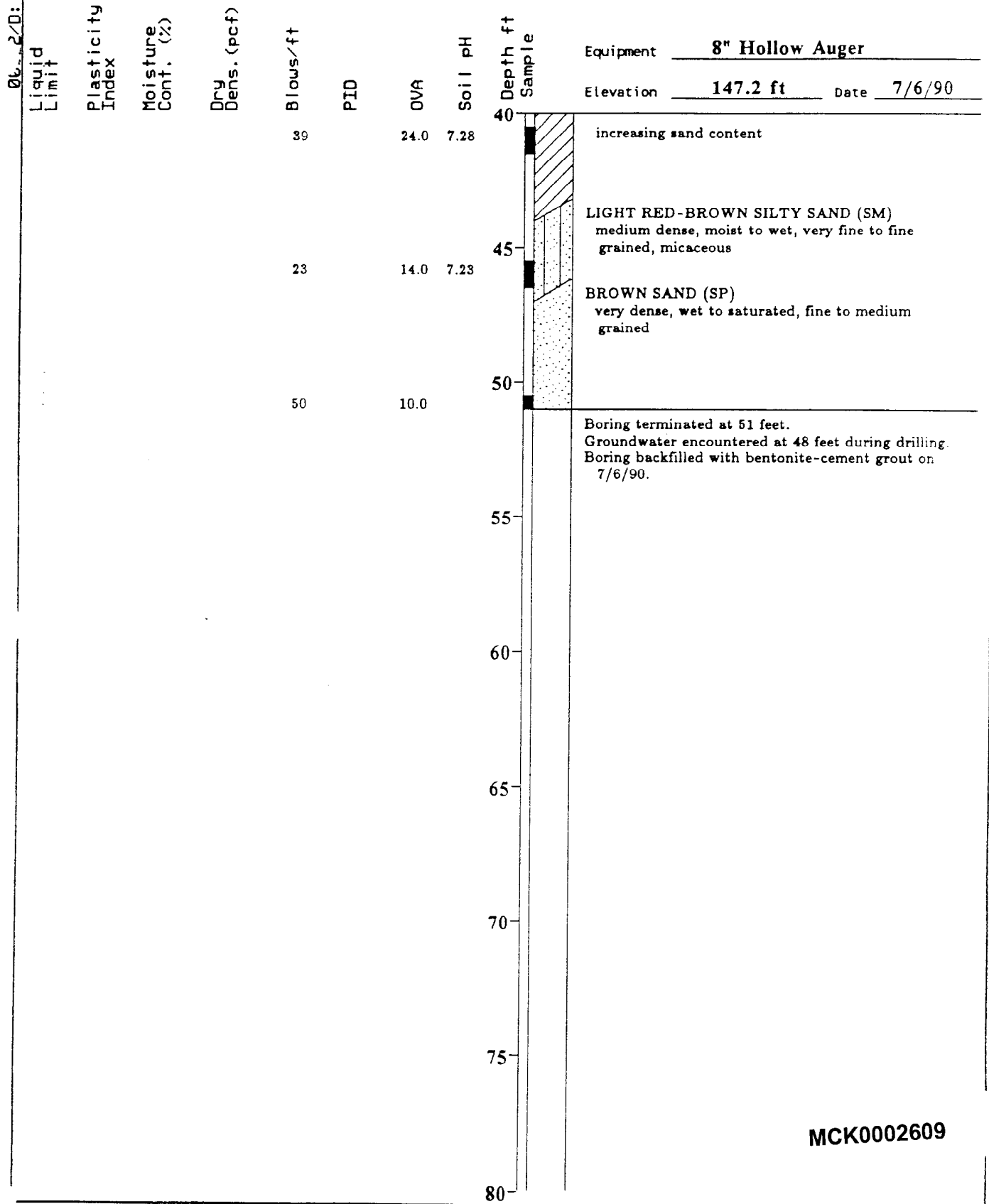
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Log of Boring MK-SB-03 (sheet 1 of 2)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B7

DRAWN HK	JOB NUMBER 17333, 168.11	APPROVED TAC	DATE 1/92	REVISED	DATE
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Log of Boring MK-SB-03 (sheet 2 of 2)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B7a

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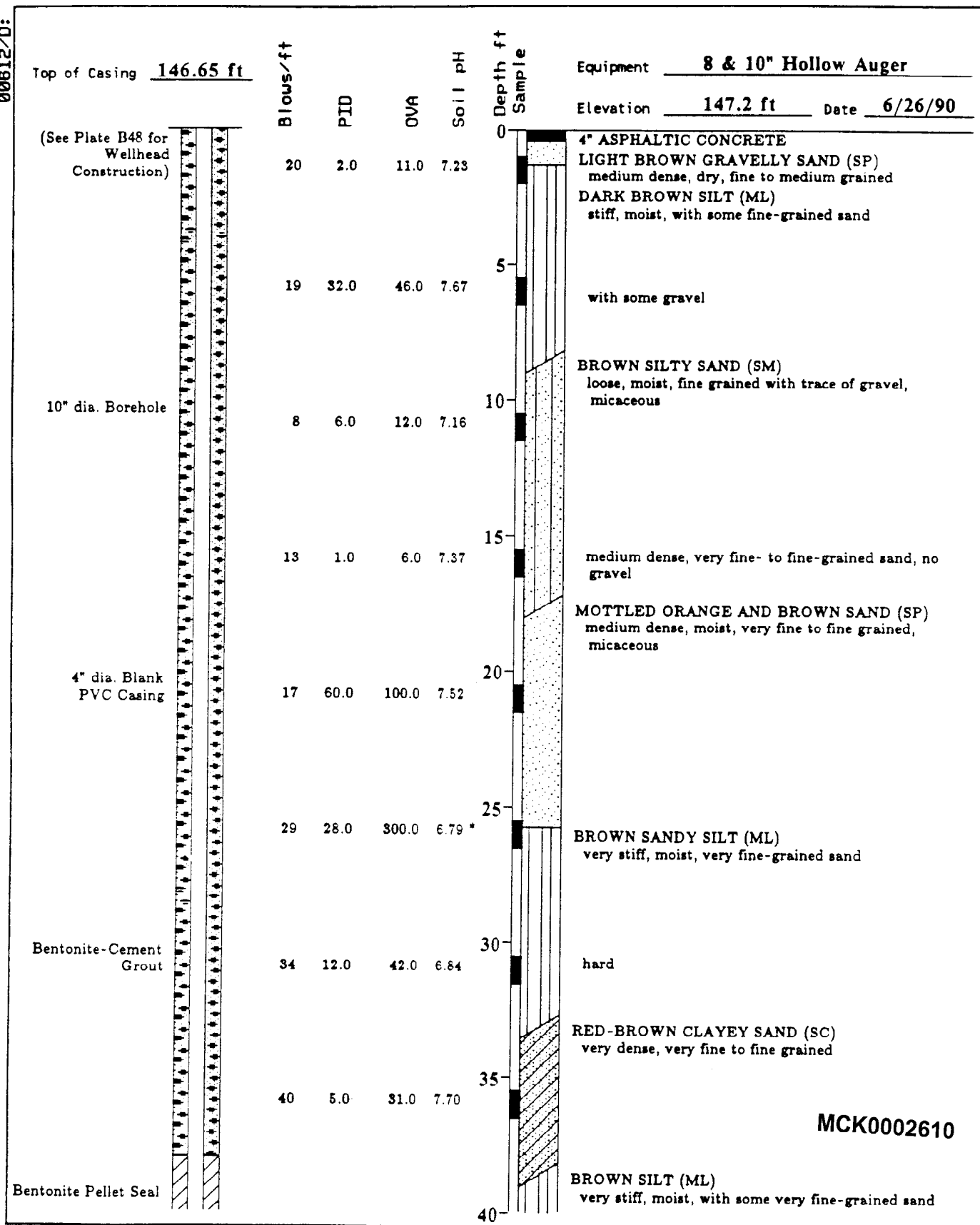
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00612/D:



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Log of Boring MK-SB-04 (sheet 1 of 2)

McKesson Corporation Property
Santa Fe Springs, California

PLATE

B8

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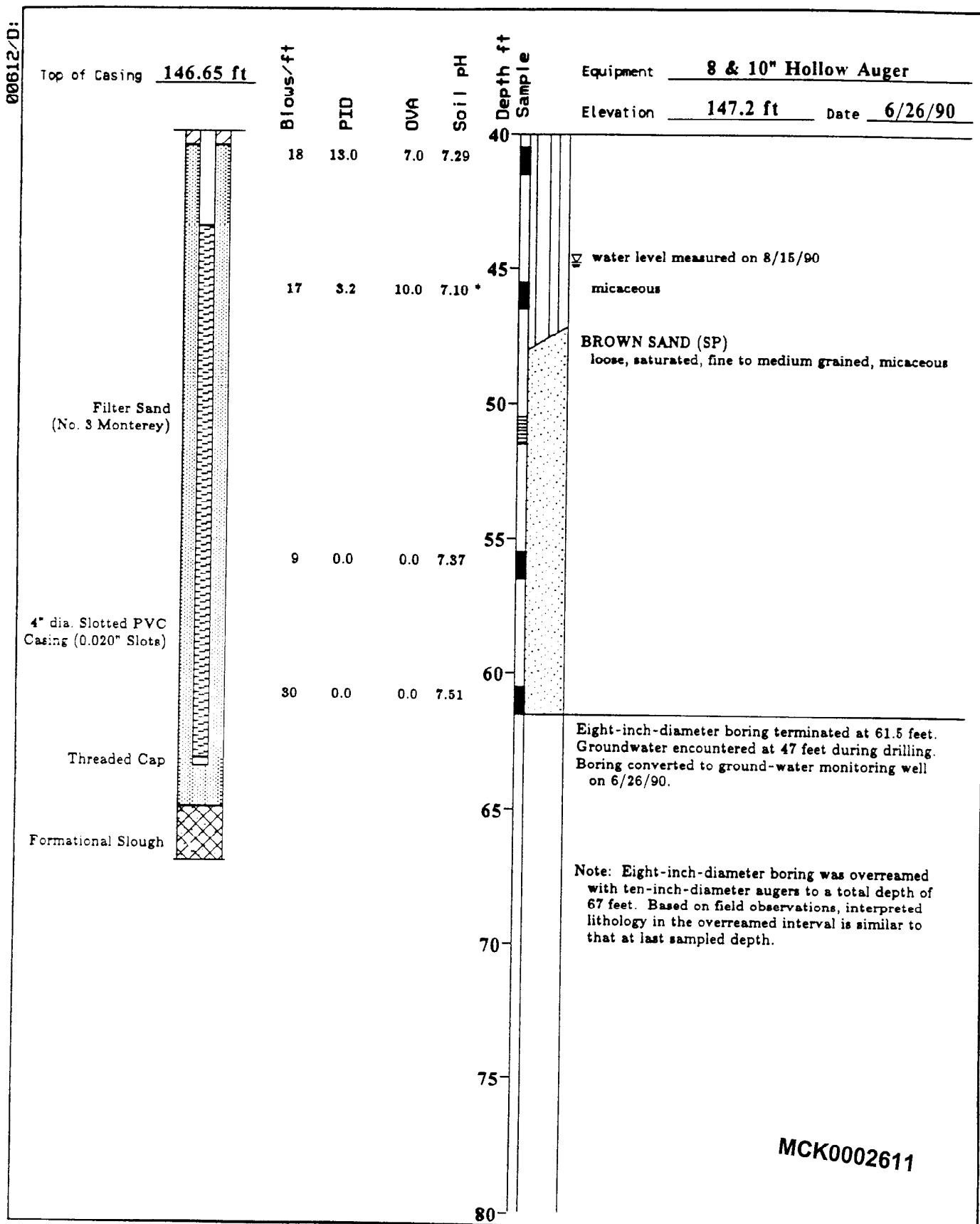
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DATE
1/92

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DATE

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Log of Boring MK-SB-04 (sheet 2 of 2)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B8a

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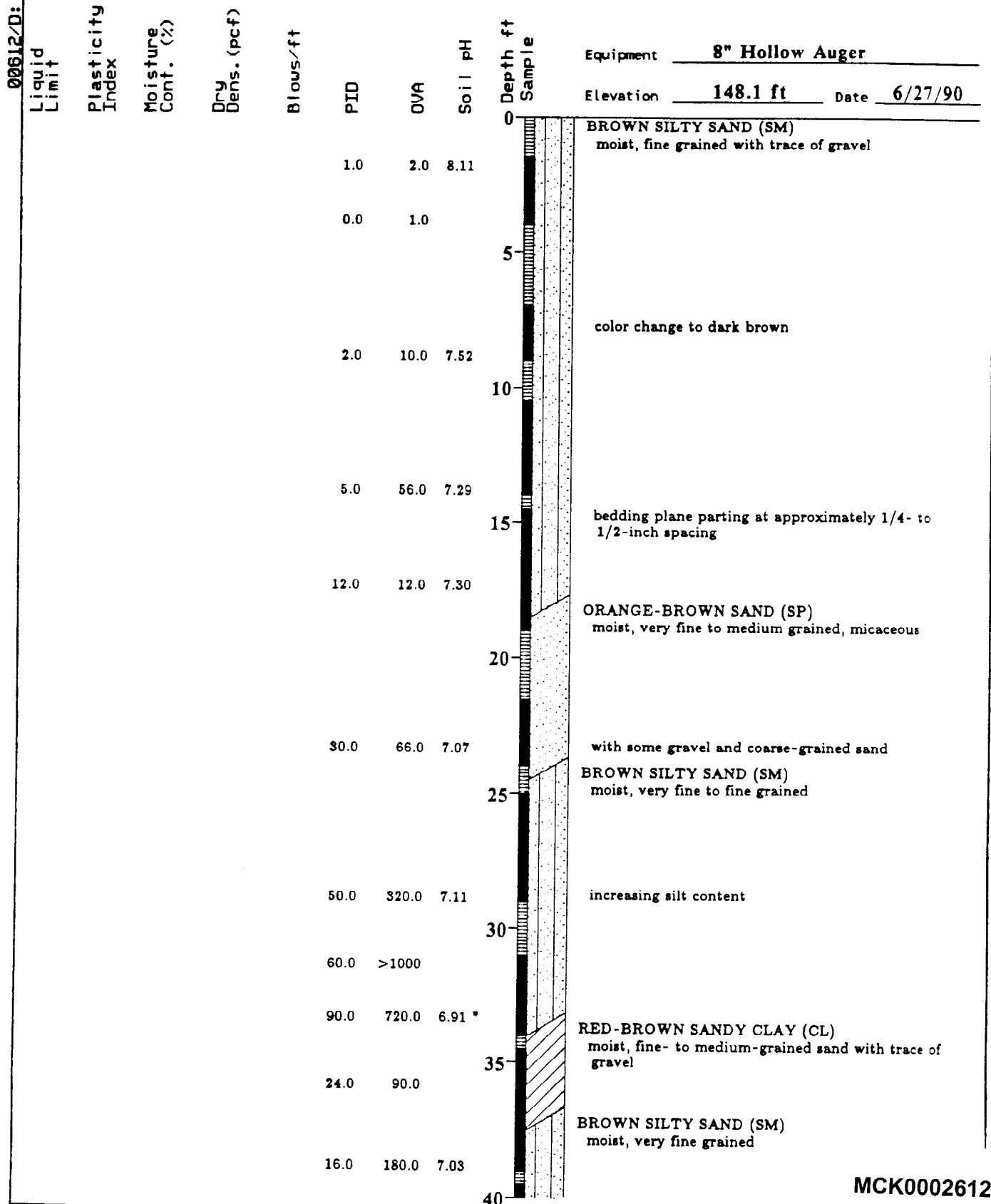
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HK

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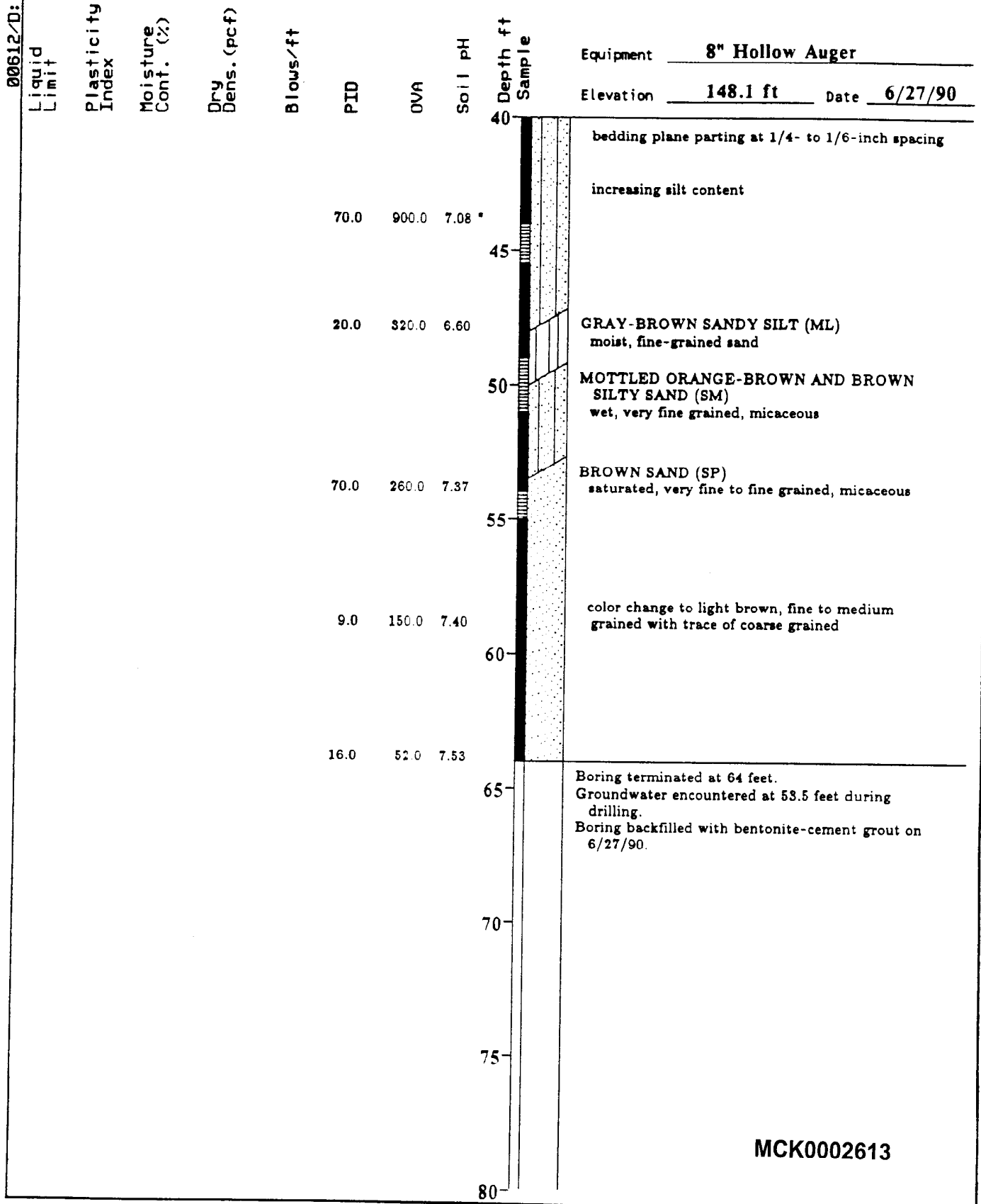
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Log of Boring MK-SB-05 (sheet 1 of 2)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B9

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Log of Boring MK-SB-05 (sheet 2 of 2)

McKesson Corporation Property
Santa Fe Springs, California

PLATE

B9a

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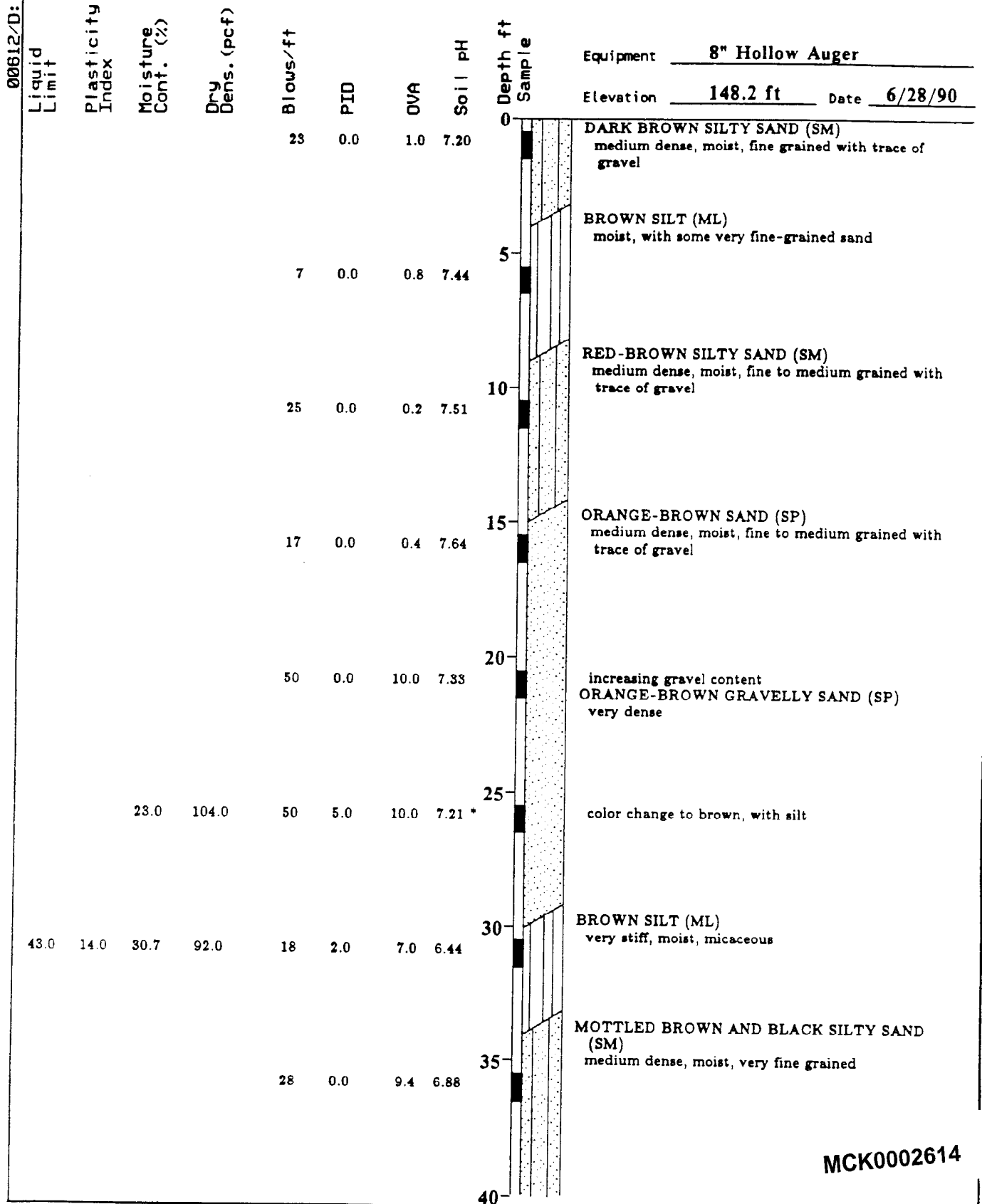
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DATE



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Log of Boring MK-SB-06 (sheet 1 of 2)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B10

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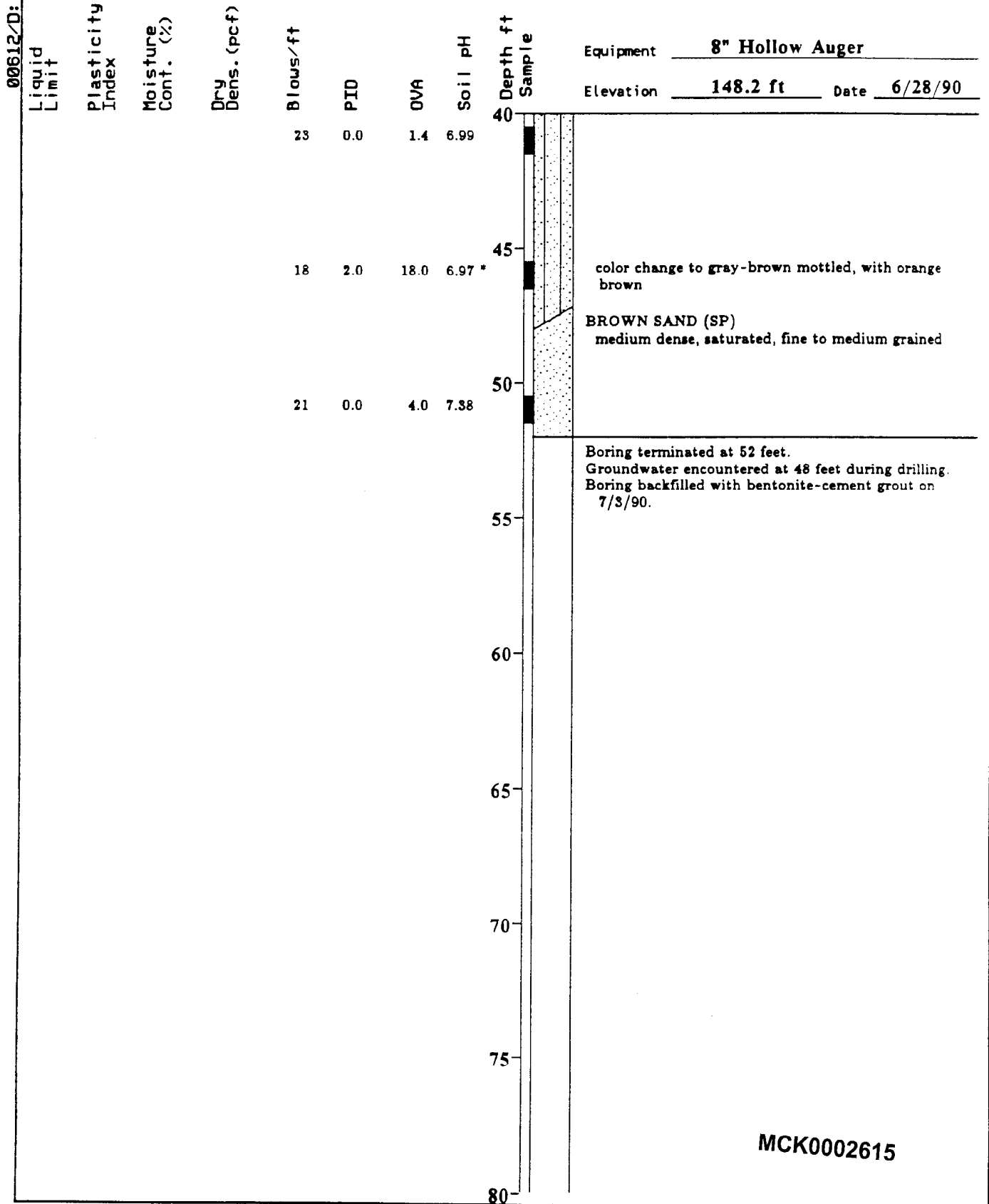
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Log of Boring MK-SB-06 (sheet 2 of 2)

McKesson Corporation Property
Santa Fe Springs, California

PLATE

B10a

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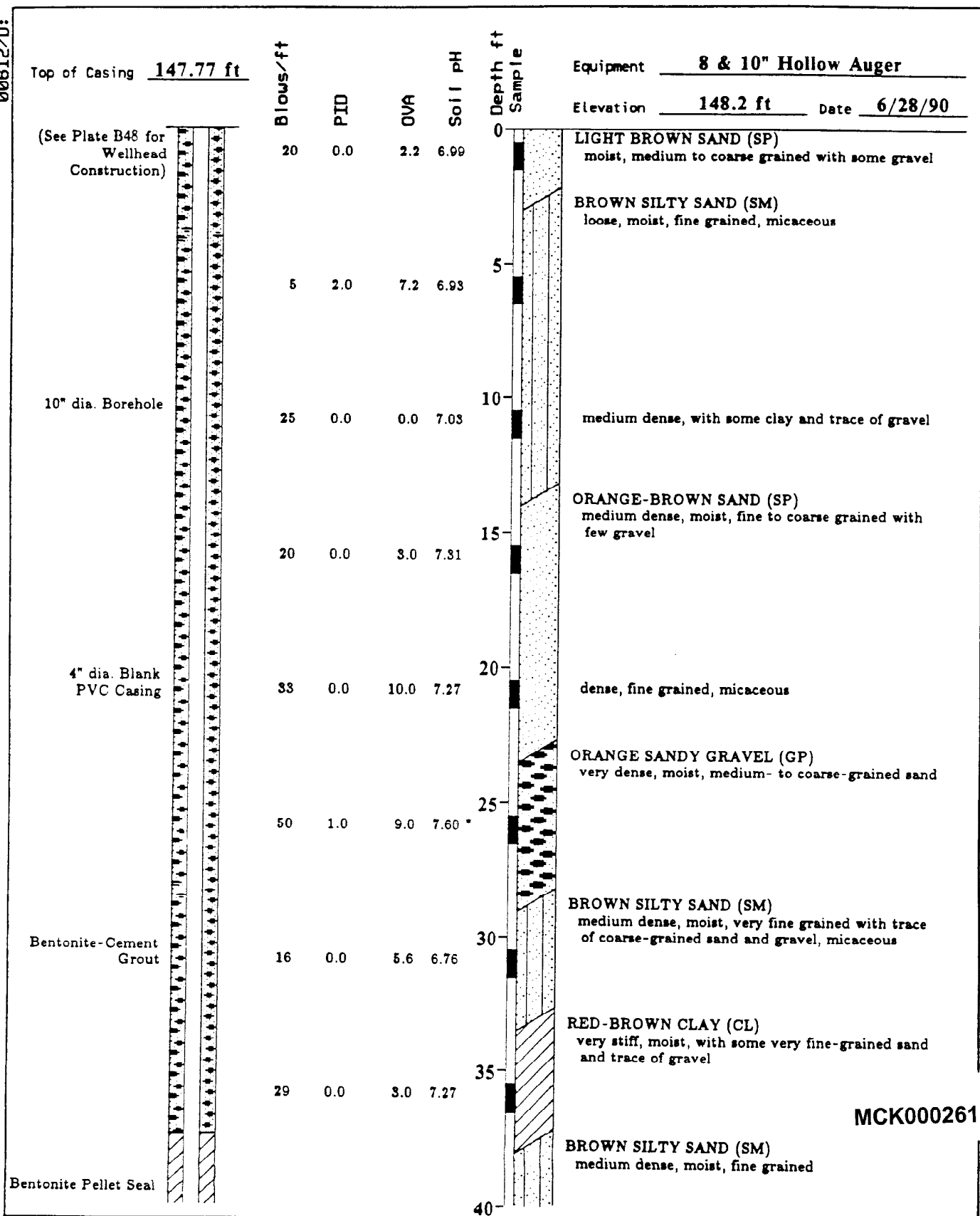
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Log of Boring MK-SB-07 (sheet 1 of 2)

McKesson Corporation Property
Santa Fe Springs, California

PLATE

B11

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DATE

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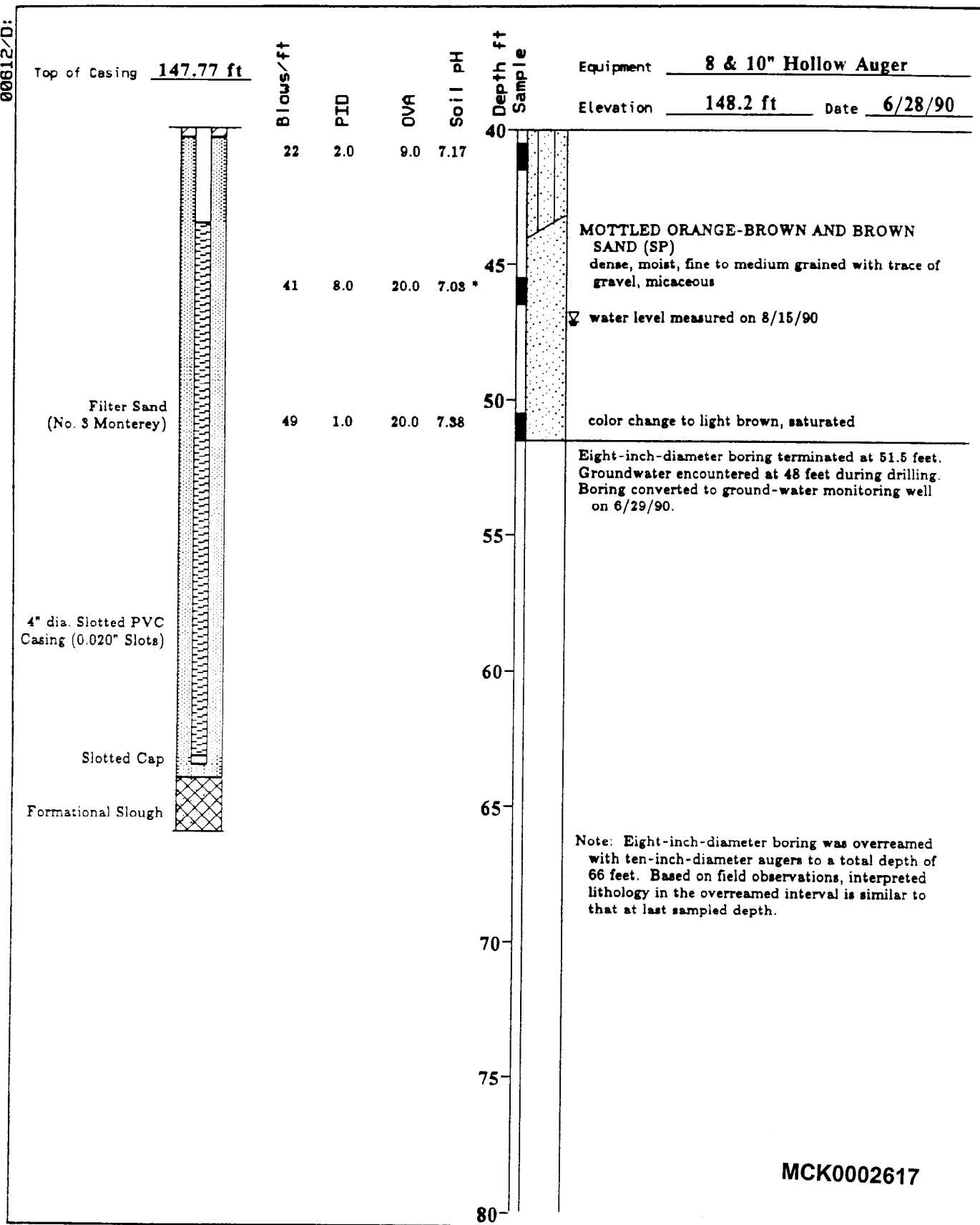
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Log of Boring MK-SB-07 (sheet 2 of 2)

PLATE

McKesson Corporation Property
Santa Fe Springs, California

B11a

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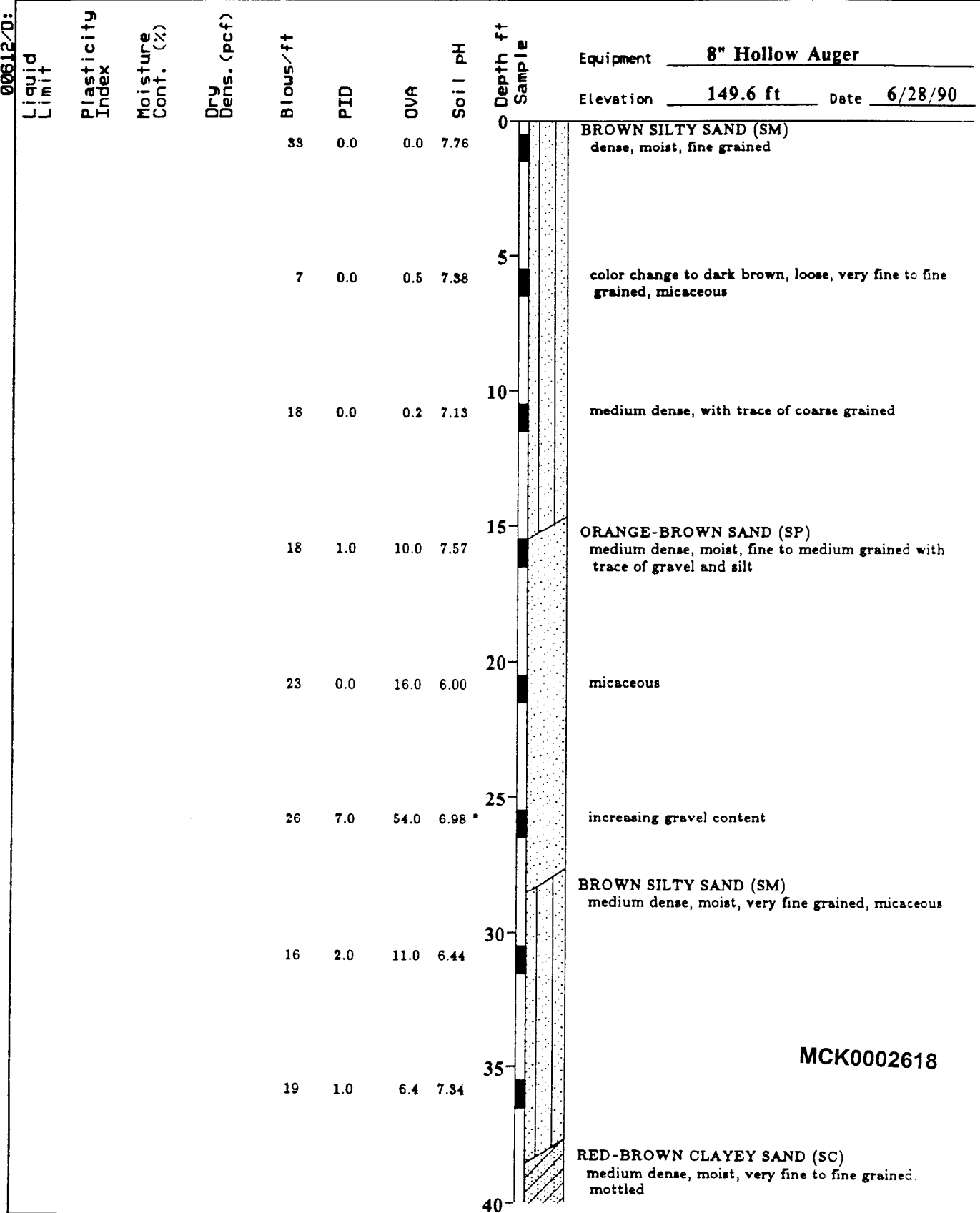
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Log of Boring MK-SB-08 (sheet 1 of 2)

PLATE

McKesson Corporation Property
Santa Fe Springs, California

B12

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17333, 168.11

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DATE

00612/D:

Liquid Limit	Plasticity Index	Moisture Cont. (%)	Dry Dens. (pcf)	Blows/ft	PID	OVA	Soil pH	Depth ft	Sample	Equipment	Elevation	Date
										8" Hollow Auger	149.6 ft	6/28/90
				26	130.0	1.0	7.47	40				
				22	3.0	1.0	7.30 *	42				
								44				
								45				
								50				
								55				
								60				
								65				
								70				
								75				
								80				

BROWN SILTY SAND (SM)
medium dense, moist, fine grained, micaceous

Boring terminated at 44 feet.
Groundwater not encountered during drilling.
Boring backfilled with bentonite-cement grout on 7/2/90.

MCK0002619



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Log of Boring MK-SB-08 (sheet 2 of 2)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B12a

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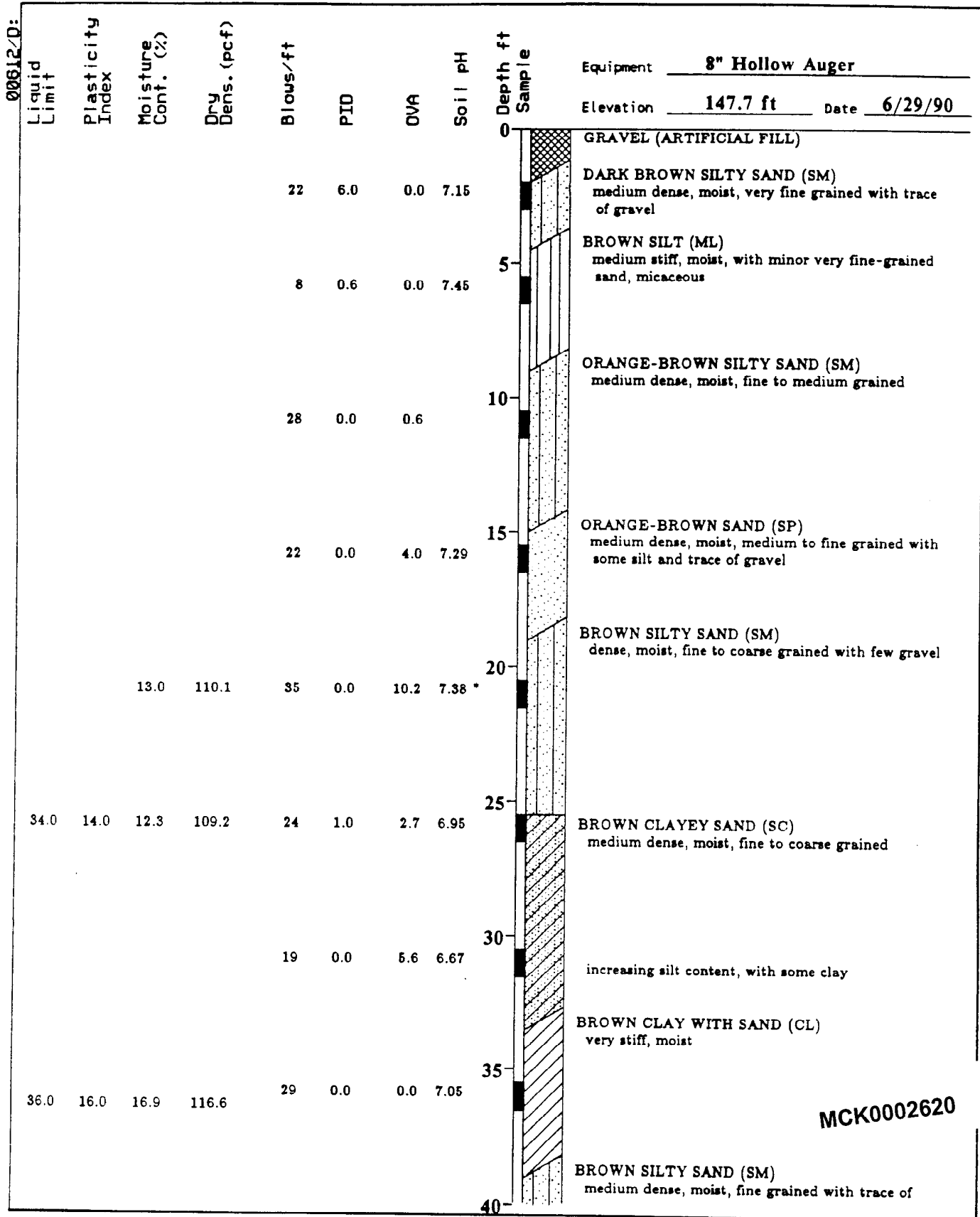
DATE

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17333, 168.11

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1/92



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Log of Boring MK-SB-09 (sheet 1 of 2)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B13

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
HK	17333,168.11	TAK	1/92		

0 or 2/D:

Top of Casing 149.44 ft

Bentonite Pellet Seal

Filter Sand
(No. 3 Monterey)

4" dia. Slotted PVC
casing (0.020" Slots)

Threaded Cap

Blows/ft

PID

OVA

Soil pH

Depth ft
Sample

Equipment

8 & 10" Hollow Auger

Elevation

149.9 ft

Date

6/22/90

micaceous

LIGHT BROWN SAND (SP)
dense, wet, fine grained, micaceous

▽ water level measured on 8/15/90

Eight-inch-diameter boring terminated at 51.5 feet.
Groundwater encountered at 49 feet during drilling.
Boring converted to ground-water monitoring well
on 6/25/90.

Note: Eight-inch-diameter boring was overreamed
with ten-inch-diameter augers to a total depth of
66 feet. Based on field observations, interpreted
lithology in the overreamed interval is similar to
that at last sampled depth.

MCK0002621



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Engineering and Environmental Services

Log of Boring MK-SB-10 (sheet 2 of 2)

McKesson Corporation Property
Santa Fe Springs, California

B14a

DATE
HK

LOG NUMBER
17333, 168.11

APPROVED
TAK

DATE
1/92

REVISION

DATE

0 of 10

Liquid Limit	Plasticity Index	Moisture Cont. (%)	Dry Dens. (pcf)	Blows/ft	PID	OVA	Soil pH	Depth ft	Sample	Equipment	Elevation	Date
										8" Hollow Auger	149.9 ft	6/22/90
				29	0.0	0.0		0				
									DARK BROWN SILTY SAND (SM)			
									dense, moist, very fine to fine grained with trace of gravel			
				10	0.0	0.0	8.33	5				
									DARK BROWN SILT (ML)			
									stiff, moist, with some fine-grained sand and minor clay			
				25	0.0	0.0	7.65	10				
									color change to red-brown, increasing sand content			
				50	0.0	0.0	8.52	15				
									ORANGE-BROWN GRAVELLY SAND (SP)			
									very dense, moist, medium to coarse grained with some silt			
				50	0.0	0.0	8.83	20				
									BROWN SAND WITH SILT (SW-SM)			
									very dense, moist, fine to coarse grained with few gravel			
33.0	9.0	21.5	105.3	22	0.0	0.0	7.79	25				
									BROWN SILT (ML)			
									very stiff, moist, with very fine-grained sand, micaceous			
				23	0.0	0.0	7.45	30				
									decreasing sand content			
				33	0.0	0.0	7.33	35				
									color change to mottled brown and gray			
									increasing sand content			
								40				

MCK0002622



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Log of Boring MK-SB-11 (sheet 1 of 2)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B15

06 V/D:

Liquor Limit	Plasticity Index	Moisture Cont. (%)	Dry Dens. (pcf)	Blows/ft	PID	OVA	Soil pH	Depth ft	Sample	Equipment	Elevation	Date
38.0	12.0	22.1	101.8	29	0.0	0.0	7.45	40		8" Hollow Auger	149.9 ft	6/22/90

Boring terminated at 41.5 feet.
Groundwater not encountered during drilling.
Boring backfilled with bentonite-cement grout on 6/22/90.

45-

50-

55-

60-

65-

70-

75-

80-

MCK0002623



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Log of Boring MK-SB-11 (sheet 2 of 2)

McKesson Corporation Property
Santa Fe Springs, California

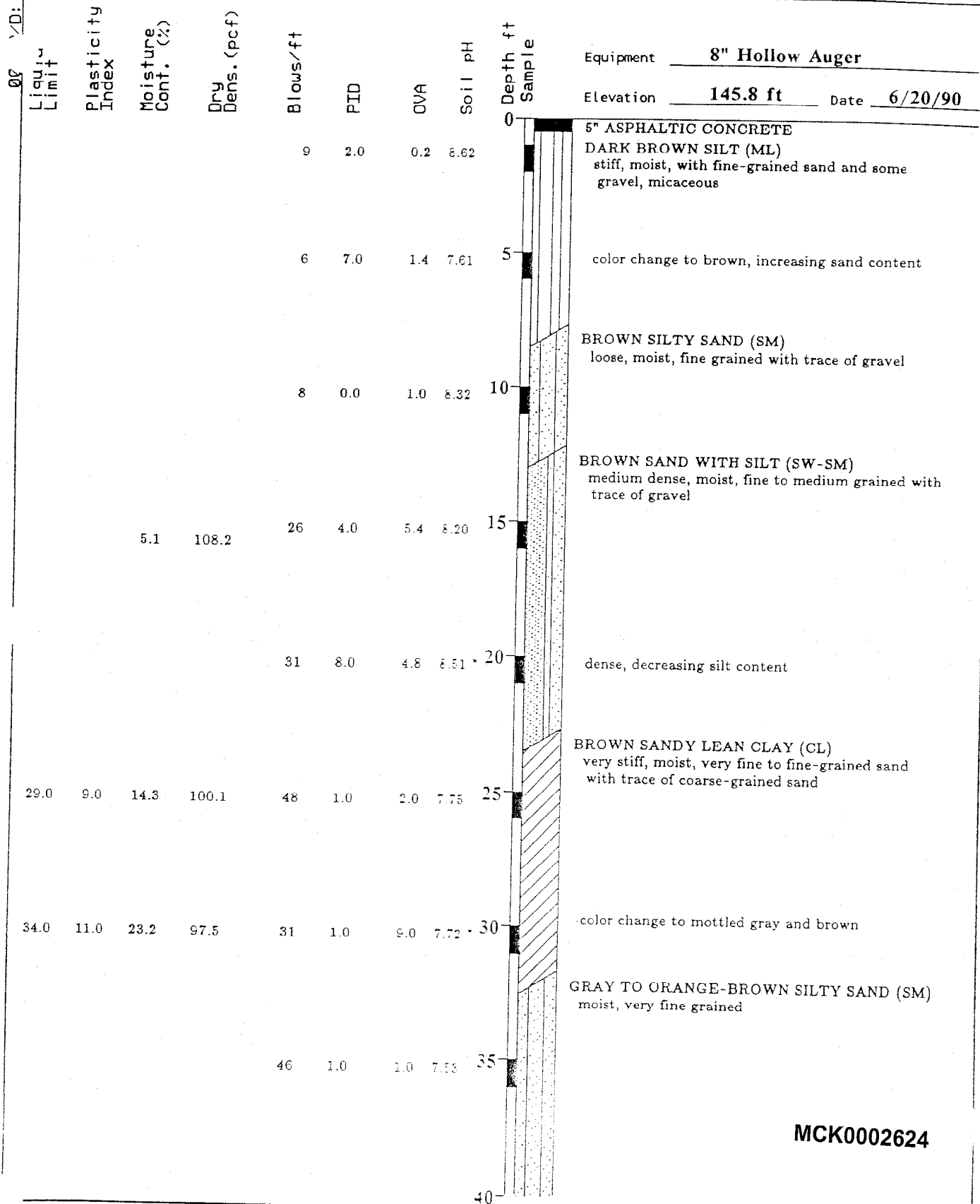
B15a

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Log of Boring MK-SB-12 (sheet 1 of 2)

McKesson Corporation Property
Santa Fe Springs, California

PLATE

B16

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HK

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1/92

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Liquid Limit

Plasticity Index

Moisture Cont. (%)

Dry Dens. (pcf)

Blows/ft
23

PID
0.0

OVA
0.5

Soil pH
7.87 *

Depth ft
Sample
40

Equipment

8" Hollow Auger

Elevation

145.8 ft

Date

6/20/90

Boring terminated at 41.5 feet.
Groundwater not encountered during drilling.
Boring backfilled with bentonite-cement grout on 6/20/90.

45

50

55

60

65

70

75

80

MCK0002625



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Log of Boring MK-SB-12 (sheet 2 of 2)

McKesson Corporation Property
Santa Fe Springs, California

PLATE

E16a

DATE

17333, 168.11

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TPL

DATE

1/92

REVISED

DATE

3/D:

0'

Top of Casing 147.62 ft

(See Plate B48 for
Wellhead
Construction)

10" dia. Borehole

4" dia. Blank
PVC Casing

Bentonite-Cement
Grout

Bentonite Pellet Seal

Blows/ft
PID
OVA
Soil pH

Depth ft
Sample

Equipment 8 & 10" Hollow Auger

Elevation 148.0 ft Date 6/20/90

10 1.0 3.1 8.37

7 3.0 4.8 8.72

17 6.0 17.0 7.80

22 1.8 24.0 7.86

41 10.0 130.0 7.85

35 58.0 205.0 7.34 *

21 8.0 160.0 7.06

46 24.0 170.0 7.25

5" ASPHALTIC CONCRETE
DARK GRAY SILTY SAND (SM)
loose, fine to medium grained with trace of gravel

medium to coarse grained, increasing gravel
content

color change to red-brown, medium dense, very
fine grained

BROWN SAND WITH SILT (SW-SM)
medium dense, moist, fine grained, micaceous

BROWN SAND WITH SILT (SP-SM)
dense, moist, fine to coarse grained with trace of
gravel

BROWN SILTY SAND (SM)
dense, very fine to fine grained, micaceous

medium dense

BROWN SILT WITH SAND (ML)
hard, moist, very fine grained, micaceous

BROWN SILTY SAND (SM)
medium dense, moist, very fine grained, micaceous

MCK0002626

40'



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Log of Boring MK-SB-13 (sheet 1 of 2)

McKesson Corporation Property
Santa Fe Springs, California

PLATE

B17

DRAWN

HK

JOB NUMBER

17333, 168.11

APPROVED

TAL

DATE

1/92

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DATE

2/D:

0

Top of Casing 147.62 ft

Blows/ft

PID

OVA

Soil pH

Depth ft
Sample

Equipment 8 & 10" Hollow Auger

Elevation 148.0 ft Date 6/20/90

Filter Sand
(No. 3 Monterey)

4" dia. Slotted PVC
Casing (0.020" Slots)

Threaded Cap

20 16.2 190.0

63 10.0 120.0

19 4.0 92.0

40

45

50

55

60

65

70

75

80

very dense, very fine to fine grained with trace of gravel

▽ water level measured on 8/15/90

color change to light brown, medium dense, saturated, micaceous

Eight-inch-diameter boring terminated at 56.5 feet. Groundwater encountered at 48 feet during drilling. Boring converted to ground-water monitoring well on 6/21/90.

Note: Eight-inch-diameter boring was overreamed with ten-inch-diameter augers to a total depth of 65 feet. Based on field observations, interpreted lithology in the overreamed interval is similar to that at last sampled depth.

MCK0002627



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Log of Boring MK-SB-13 (sheet 2 of 2)

McKesson Corporation Property
Santa Fe Springs, California

B17a

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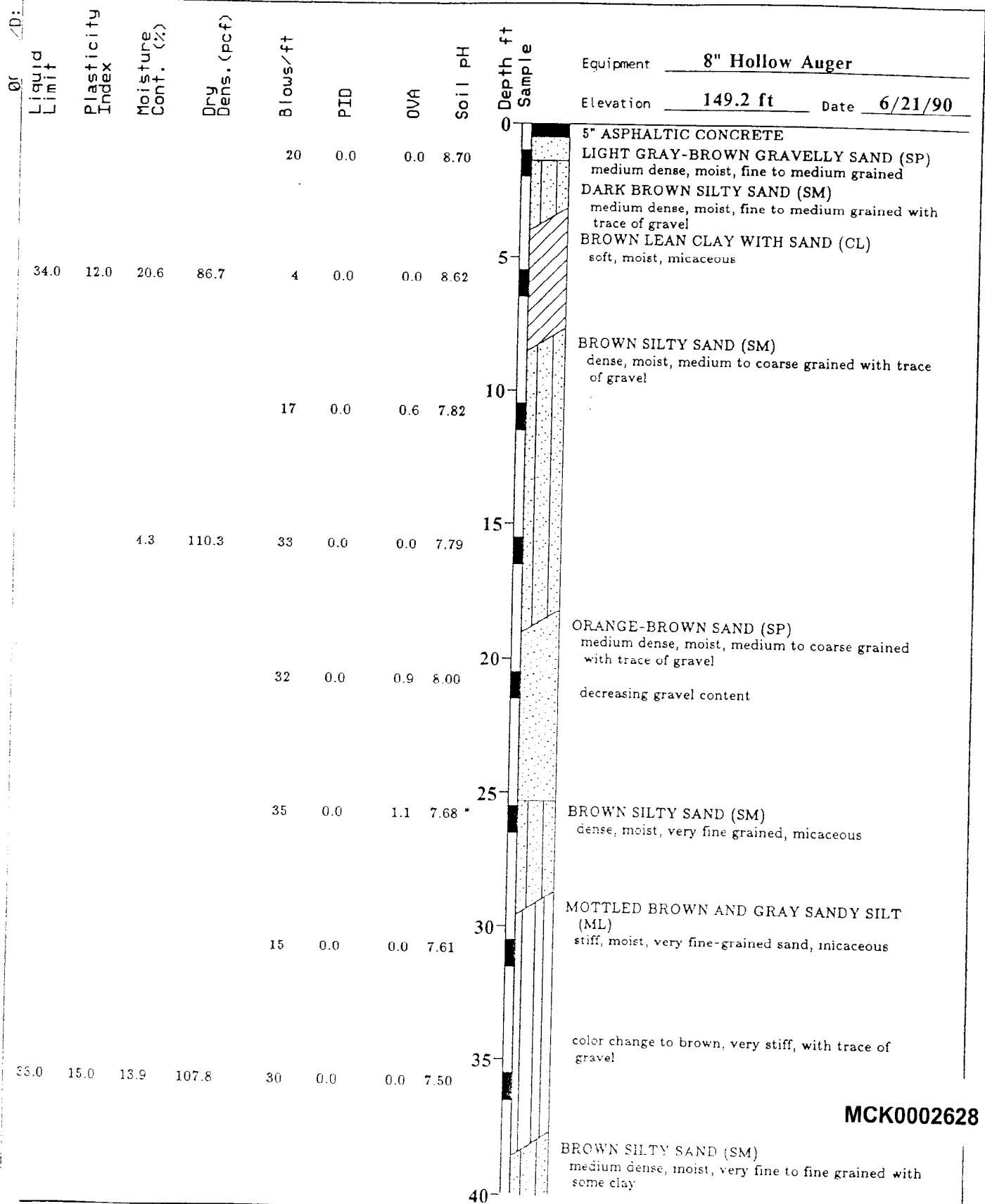
DATE

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PLATE



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Log of Boring MK-SB-14 (sheet 1 of 2)
McKesson Corporation Property
Santa Fe Springs, California

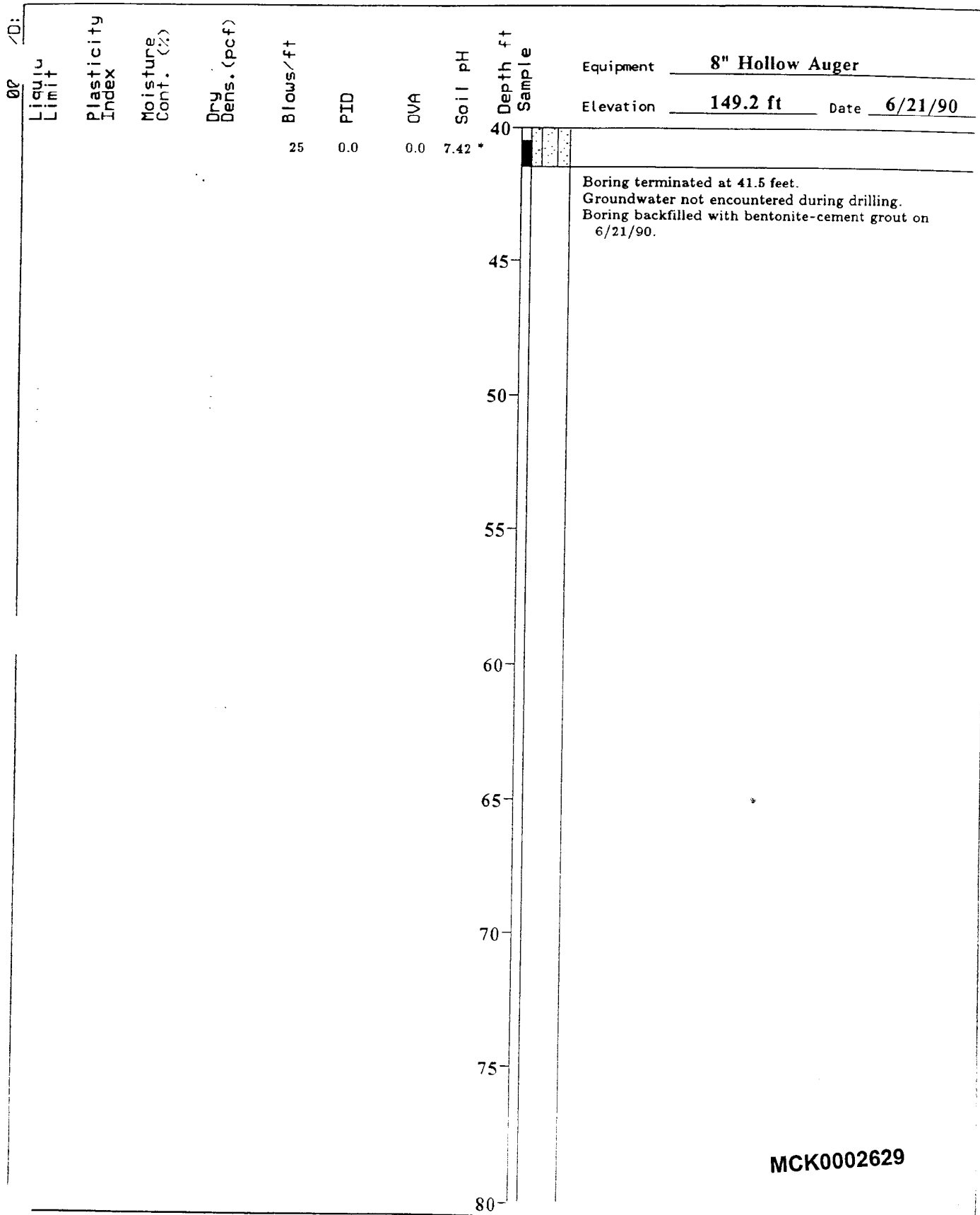
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17333, 168.11

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Log of Boring MK-SB-14 (sheet 2 of 2)

McKesson Corporation Property
Santa Fe Springs, California

B18a

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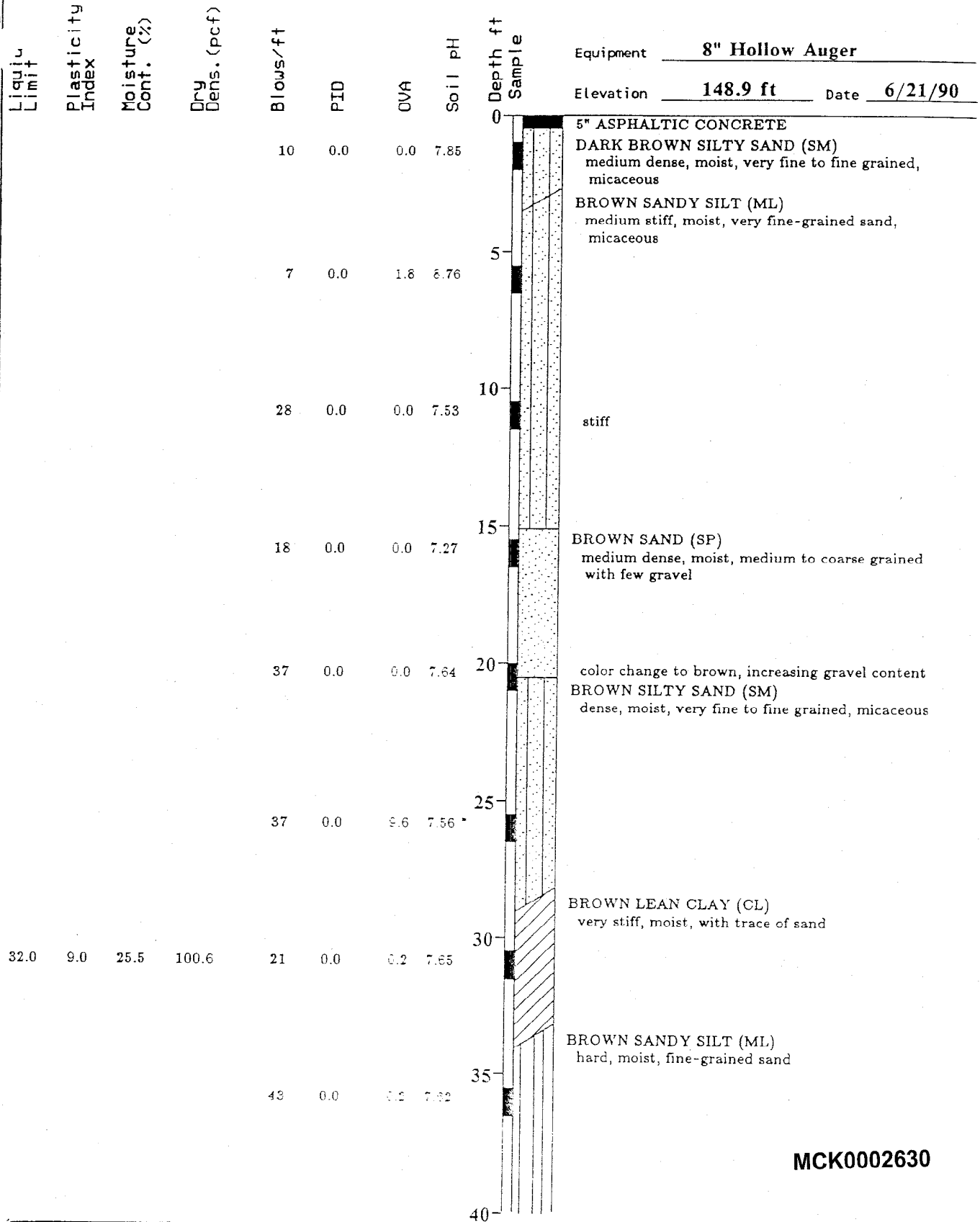
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[Signature]

DATE

1/92

00' 10'



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Log of Boring MK-SB-15 (sheet 1 of 2)
McKesson Corporation Property
Santa Fe Springs, California

B19

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HK

17333, 168.11

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[Signature]

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PLATE

00 00

Liquor
LimitPlasticity
IndexMoisture
Cont. (%)Dry
Dens. (pcf)

Blows/ft

PID

OVA

Soil pH

Depth ft
Sample

Equipment

8" Hollow Auger

Elevation

148.9 ft

Date

6/21/90

17.2

111.7

30

0.0

0.2

7.65 *

40

45

50

55

60

65

70

75

80

Boring terminated at 41.5 feet.
Groundwater not encountered during drilling.
Boring backfilled with bentonite-cement grout on
6/21/90.

MCK0002631



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Log of Boring MK-SB-15 (sheet 2 of 2)

PLATE

McKesson Corporation Property
Santa Fe Springs, California

B19a

DATE

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DATE

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Liquida
LimitPlasticity
IndexMoisture
Cont. (%)

Dry
Dens. (pcf)

Blows/ft

DI

DVA

105-12

Depth ft
Sample

Equipment

8" Hollow Auger

Elevation

148.1 ft

Date 7/2/90

6" CONCRETE SLAB
GRAVEL SUBBASE
BROWN SILTY SAND (SM)
very loose, moist, very fine to fine grained with
some gravel

color change to dark brown, loose, micaceous

color change to red-brown, medium dense, with some medium-grained sand

BROWN SAND WITH GRAVEL (SW)
medium dense, moist, medium to coarse grained

BROWN SAND (SP)
medium dense, moist, fine to coarse grained

BROWN SILTY SAND (SM)
medium dense, moist, very fine to fine grained,
micaceous

color change to mottled orange-brown and brown

color change to red-brown, increasing sand content,
with some clay

color change to mottled orange-brown and

MCK0002632



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Log of Boring MK-SB-16 (sheet 1 of 2)

McKesson Corporation Property
Santa Fe Springs, California

PLATE

B20

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 84

HK

File Paths

17333,168,11

$$-2 \leq \text{pH} \leq 1$$

75

1000

1/92

0' 10'

| Liquid Limit | Plasticity Index | Moisture Cont. (%) | Dry Dens. (pcf) | Blows/ft | PID | OVA | Soil pH | Depth ft Sample | Equipment | Elevation | Date |
|--------------|------------------|--------------------|-----------------|----------|------|-------|---------|-----------------|--|-----------|--------|
| | | | | | | | | 40 | 8" Hollow Auger | 148.1 ft | 7/2/90 |
| | | | | | | | | | gray-brown | | |
| | | | | 65 | 20.0 | 140.0 | 7.96 | 45 | BROWN SAND (SP)
very dense, moist, fine to medium grained with trace of coarse grained | | |
| | | | | 30 | 0.0 | 0.2 | 7.86 | 50 | color change to gray, saturated, with trace of silt and gravel | | |
| | | | | 39 | 0.0 | 0.2 | 7.83 | 55 | | | |
| | | | | | | | | 60 | Boring terminated at 58.5 feet.
Groundwater encountered at 50 feet during drilling.
Boring backfilled with bentonite-cement grout on 7/5/90. | | |
| | | | | | | | | 65 | | | |
| | | | | | | | | 70 | | | |
| | | | | | | | | 75 | | | |
| | | | | | | | | 80 | | | |

MCK0002633



Harding Lawson Associates
Engineering and Environmental Services

Log of Boring MK-SB-16 (sheet 2 of 2)

McKesson Corporation Property
Santa Fe Springs, California

B20a

01
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35
36
37
38
39
40

Top of Casing 148.63 ft

(See Plate B48 for
Wellhead
Construction)

10" dia. Borehole

4" dia. Blank
PVC Casing

Bentonite-Cement
Grout

Blows/ft

PID

OVA

Soil pH

Depth ft
Sample

Equipment 8 & 10" Hollow Auger

Elevation 149.0 ft Date 7/3/90

0 10" CONCRETE SLAB
4" GRAVEL SUBBASE
DARK BROWN SILTY SAND (SM)
medium dense, moist, very fine to fine grained with
trace of gravel

5 loose, with some medium grained

10 color change to red-brown, decreasing silt content

15 ORANGE-BROWN GRAVELLY SAND (SP)
medium dense, moist, medium to coarse grained
with trace of silt

20 no gravel

25 MOTTLED ORANGE-BROWN AND BROWN
SILT WITH SAND (SM)
dense, moist, very fine grained, micaceous

30 RED-BROWN CLAYEY SAND (SC)
dense, moist, fine grained

35

40 MOTTLED GRAY-BROWN AND
ORANGE-BROWN SILTY SAND (SM)
medium dense, moist, very fine to fine grained with
trace of medium grained

10 0.0 0.4 4.34 *

7 0.0 0.2 7.20

16 0.0 12.0 6.89

27 3.0 2.4 7.97

24 4.0 5.2 7.87

30 6.0 3.8 7.41

24 4.0 9.0 7.40

40 1.0 1.6 7.90

MCK0002634



Harding Lawson Associates
Engineering and Environmental Services

Log of Boring MK-SB-17 (sheet 1 of 2)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B21

DATE: 1/92 JOB NUMBER: 17333, 168.11 APPROVED: THK DATE: 1/92 REVISION: DATE:

00: 1/0:

Top of Casing 148.63 ft

Equipment 8 & 10" Hollow Auger

Elevation 149.0 ft Date 7/3/90

Bentonite Pellet Seal

| Blows/ft | PID | OVA | Soil pH |
|----------|-----|-----|---------|
| 21 | 0.0 | 1.8 | 8.74 * |

Depth ft
Sample

40

45

50

55

60

65

70

75

80

increasing sand content
BROWN SAND (SP)
dense, wet, fine grained

water level measured on 8/15/90

medium to coarse grained with some gravel

dense

medium dense

Eight-inch-diameter boring terminated at 65 feet. Ground water encountered at 48 feet during drilling. Boring converted to ground-water monitoring well on 7/3/90.

Note: Eight-inch-diameter boring was overreamed with ten-inch-diameter augers to a total depth of 66 feet. Based on field observations, interpreted lithology in the overreamed interval is similar to that at last sampled depth.

MCK0002635



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Engineering and Environmental Services

Log of Boring MK-SB-17 (sheet 2 of 2)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B21a

01 D:

Top of Casing 149.56 ft

(See Plate B48 for Wellhead Construction)

12" dia. Mild-Steel Conductor Casing

16" dia. Bucket Auger Borehole

Bentonite Volclay Grout

PID

OVA

Soil pH

Depth ft
Sample

Equipment

Bucket / Mud

Elevation

149.8 ft

Date

1/30/91

6" GRAVEL BASE

BROWN SANDY SILT (ML)

moist, fine-grained sand with trace of medium-grained sand

increase in sand content

RED-BROWN SILTY SAND (SM)

moist, fine grained with trace of medium-grained sand

increasing sand content

RED-BROWN SAND (SP)

moist, fine to medium grained with trace of coarse-grained sand, some silt and gravel

decrease in gravel content

BROWN SILT (ML)

moist, with trace of fine-grained sand

color change to orange-brown, increasing sand content, micaceous

MCK0002636

decreasing sand content

16-inch-diameter bucket auger boring terminated at

40 feet.

12-inch-diameter mild-steel conductor casing installed to 40 feet.

Boring continued below 41.5 feet with a 4-inch-diameter Christensen wireline coring system.

40-



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Engineering and Environmental Services

Log of Boring MK-SB17A (sheet 1 of 4)

McKesson Corporation Property
Santa Fe Springs, California

B22

| | | | | | |
|------|---------------|------------|------|----------|------|
| DATE | DR NUMBER | APPROVED | DATE | REVISION | DATE |
| HK | 17333, 168.11 | <i>THK</i> | 1/92 | | |

00: 00:

Top of Casing 149.56 ft

Equipment Bucket / Mud
Elevation 149.8 ft Date 1/30/91

16" dia. Bucket
Auger Borehole

Bentonite Volclay
Grout

4" dia. Blank
PVC Casing

9-7/8" dia. Borehole

4" dia. Blank
PVC Casing

PID
0.0
0.0

OVA
0.0

Soil pH

Depth ft
Sample

40

color change to gray-brown with mottled orange
iron-oxide staining
BROWN SAND (SP)
loose, wet to moist, fine grained with trace of
medium grained, micaceous

45

water level measured on 4/11/91

50

saturated, fine to medium grained with trace of
coarse-grained sand

55

2-inch-thick fine-grained sand with silt lens
fine- to medium-grained sand with trace of gravel

60

stratified medium grained with fine-grained sand
fine- to medium-grained sand
2-inch-thick silt lens

65

predominantly medium-grained sand with some
fine- and coarse-grained sand
3" silt lens
fine-grained sand with some silt

70

fine grained with some medium-grained sand
6" lens of predominantly medium-grained sand
color change to red-brown, fine grained with trace
of silt, no medium-grained sand, micaceous, thin
lenses of brown sand
color change to gray with trace of gravel

75

medium- to coarse-grained sand with some
fine-grained sand and trace of fine rounded to
subrounded gravel

80

fine grained with red-brown color laminations and
minor silt

RED-BROWN SILTY SAND (SM)
very dense, wet to saturated, fine grained,
micaceous, laminated

MCK0002637



Harding Lawson Associates
Engineering and Environmental Services

Log of Boring MK-SB17A (sheet 2 of 4)

McKees on Corporation Property
Santa Fe Springs, California

B22a

0' 1/20'

Top of Casing 149.56 ft

Equipment Bucket / Mud

Elevation 149.8 ft Date 1/30/91

9-7/8" dia. Borehole

Bentonite Volclay
Grout

Bentonite Pellet Seal

Filter Sand
(Monterey No. 3)

4" dia. Wire Wound
Stainless Steel
Casing (0.020" Slots)

Bottom Cap

Bentonit Pellet Seal

Blows/ft

PID

OVA

Soil pH

Depth ft
Sample

80

85

90

95

100

105

110

115

120

BROWN AND RED-BROWN SAND (SP)
saturated, fine grained, micaceous with minor silt
and trace of gravel, mottled and laminated

increasing silt content

BROWN SILTY SAND (SM)
fine grained, micaceous
with minor sand

BROWN SAND (SP)
fine to medium grained, well sorted subangular to
subrounded with trace of silt

some fine- and coarse-grained sand with trace of
fine subangular gravel
fining downward
fine-grained sand

homogeneous fine-grained sand with some silt

color change to gray, poorly sorted fine grained
with some medium-grained sand, trace of
coarse-grained sand and silt
increasing silt content, with trace of gravel

inferred gravelly horizon from drilling conditions;
driller reports very loose material

fine grained with some medium-grained sand
color change to gray

BROWN SILT (ML)
with very fine-grained sand micaceous

with trace of clay

MCK0002638



Harding Lawson Associates
Engineering and Environmental Services

Log of Boring MK-SB17A (sheet 3 of 4)

McKesson Corporation Property
Santa Fe Springs, California

B22b

1/0:

0(

Top of Casing 149.56 ft

Blows/ft

PID

OVA

Soil pH

Depth ft

Sample

Equipment

Bucket / Mud

Elevation

149.8 ft

Date

1/30/91

4" dia. Borehole

Bentonite Pellet Seal

120

125

130

135

140

145

150

155

160

4-inch-diameter Christensen wireline continuous cored borehole terminated at 130 feet. Groundwater encountered at approximately 50 feet during drilling.
4-inch-diameter borehole backfilled from 118 to 130 feet with bentonite-pellet seal.
4-inch-diameter borehole overreamed with a 9-7/8 inches in diameter bit to 118 feet and converted to groundwater monitoring well on 1/30/91.

MCK0002639



Harding Lawson Associates
Engineering and Environmental Services

Log of Boring MK-SB17A (sheet 4 of 4)

McKesson Corporation Property
Santa Fe Springs, California

PLATE

B22c

001 /0:

Top of Casing 149.51 ft

(See Plate B48 for Wellhead Construction)

12" dia. Mild-Steel Conductor Casing

16" dia. Bucket Auger Borehole

Bentonite Volclay Grout

9-7/8" dia. Borehole

Blows/ft

PID

OVA

Soil pH

Depth ft
Sample

Equipment

Bucket / Mud

Elevation

149.9 ft

Date

1/30/91

Note:

Not sampled due to proximity to Boring MK-SB-17A, see MK-SB-17A for lithologic log.

MCK0002640



Harding Lawson Associates
Engineering and Environmental Services

Log of Boring MK-SB17B (sheet 1 of 3)

McKesson Corporation Property
Santa Fe Springs, California

B23

DRAWN
HK

BY NUMBER
17333, 168.11

APPROVED
TAK

DATE
1/92

REVISION

DATE

002

Top of Casing 149.51 ft

Blows/ft

PID

OVA

Soil pH

Depth ft
Sample

Equipment

Bucket / Mud

Elevation

149.9 ft

Date

1/30/91

16" dia. Bucket
Auger Borehole

Bentonite Volclay
Grout

4" dia. Blank
PVC Casing

Bentonite Pellet Seal

16-inch-diameter bucket auger boring terminated at 40 feet.
12-inch-diameter mild-steel conductor casing installed to 40 feet.
Boring converted below 40 feet with a 9-7/8 inches in diameter bit using mud rotary.

water level measured on 4/11/91

MCK0002641

80



Harding Lawson Associates
Engineering and Environmental Services

Log of Boring MK-SB17B (sheet 2 of 3)

McKesson Corporation Property
Santa Fe Springs, California

B23a

DRAWN

DATE NUMBER

17333, 168.11

APPROVED

TAL

DATE

1/92

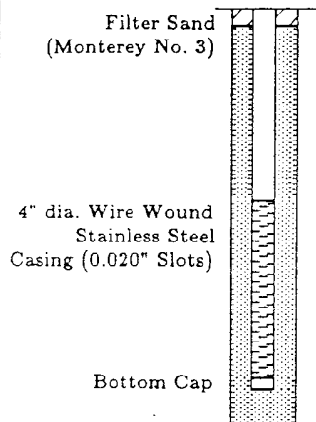
REVISION

DATE

HK

00 /D:

Top of Casing 149.51 ft



Blows/ft

PTD

OVA

Soil pH

Depth ft
Sample

Equipment

Bucket / Mud

Elevation

149.9 ft

Date

1/30/91

80

85

90

95

100

105

110

115

120

Boring terminated at 91 feet.
Groundwater encountered at approximately 50 feet
during drilling.
Boring converted to ground-water monitoring well
on 2/7/91.

MCK0002642



Harding Lawson Associates
Engineering and Environmental Services

Log of Boring MK-SB17B (sheet 3 of 3)
McKesson Corporation Property
Santa Fe Springs, California

B23b

| | | | | | |
|----------|---------------|------------|-------|----------|------|
| DATE | LOG NUMBER | APPROVED | DRAWN | REVISION | DATE |
| 01/30/91 | 17333, 168.11 | <i>THK</i> | | | 1/92 |

2/0:

| Liquid Limit | Plasticity Index | Moisture Cont. (%) | Dry Dens. (pcf) | Blows/ft | PID | OVA | Soil pH | Depth ft | Sample | Equipment | Elevation | Date |
|--------------|------------------|--------------------|-----------------|----------|-----|------|---------|----------|--|-----------------|-----------|--------|
| | | | | | | | | | | 8" Hollow Auger | 148.5 ft | 7/3/90 |
| | | | | 10 | 0.0 | 1.4 | 6.39 * | 0 | 6" GRAVEL BASE | | | |
| | | | | | | | | | LIGHT BROWN SANDY GRAVEL (GP) | | | |
| | | | | | | | | | dry | | | |
| | | | | | | | | | BROWN SILTY SAND (SM) | | | |
| | | | | | | | | | medium dense, moist, fine grained with trace of gravel | | | |
| | | | | 12 | 0.0 | 0.0 | 7.07 | 5 | | | | |
| | | | | | | | | | micaceous | | | |
| | | | | 13 | 4.0 | 9.0 | 7.29 | 10 | | | | |
| | | | | | | | | | color change to red-brown, with trace of coarse grained | | | |
| | | | | 16 | 3.0 | 7.4 | 7.55 | 15 | | | | |
| | | | | | | | | | ORANGE-BROWN SAND (SP) | | | |
| | | | | | | | | | medium dense, moist, fine to coarse grained with some silt and trace of gravel | | | |
| | | | | 50 | 1.0 | 18.0 | 7.92 | 20 | | | | |
| | | | | | | | | | increasing gravel content to a gravelly sand | | | |
| | | | | 24 | 1.0 | 1.8 | 7.28 | 25 | | | | |
| | | | | | | | | | MOTTLED RED-BROWN AND BROWN SILTY SAND (SM) | | | |
| | | | | | | | | | medium dense, moist, very fine to fine grained, micaceous | | | |
| | | | | 19 | 0.2 | 1.8 | 7.26 | 30 | | | | |
| | | | | | | | | | color change to dark red-brown | | | |
| | | | | 25 | 0.0 | 0.6 | 7.18 | 35 | | | | |
| | | | | | | | | | RED-BROWN CLAYEY SAND (SC) | | | |
| | | | | | | | | | medium dense, moist, fine grained | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | GRAY-BROWN SILTY SAND (SM) | | | |
| | | | | | | | | | medium dense, moist, fine grained with trace of coarse grained | | | |

MCK0002643



Harding Lawson Associates
Engineering and Environmental Services

Log of Boring MK-SB-18 (sheet 1 of 2)
McKesson Corporation Property
Santa Fe Springs, California

B24

06 /D:

| Liquor Limit | Plasticity Index | Moisture Cont. (%) | Dry Dens. (pcf) | Blows/ft | PID | OVA | Soil pH | Depth ft | Sample |
|--------------|------------------|--------------------|-----------------|----------|-----|-----|---------|----------|--------|
| | | | | 17 | 0.0 | 0.4 | 7.35 | 40 | |
| | | | | | | | | 45 | |
| | | | | | | | | 50 | |
| | | | | | | | | 55 | |
| | | | | | | | | 60 | |
| | | | | | | | | 65 | |
| | | | | | | | | 70 | |
| | | | | | | | | 75 | |
| | | | | | | | | 80 | |

Equipment 8" Hollow Auger
 Elevation 148.5 ft Date 7/3/90

Boring terminated at 41.5 feet.
 Groundwater not encountered during drilling.
 Boring backfilled with bentonite-cement grout on 7/8/90.

MCK0002644



Harding Lawson Associates
 Engineering and Environmental Services

Log of Boring MK-SB-18 (sheet 2 of 2)
 McKesson Corporation Property
 Santa Fe Springs, California

PLATE

B24a

DRAWN

HK

10611 MBP

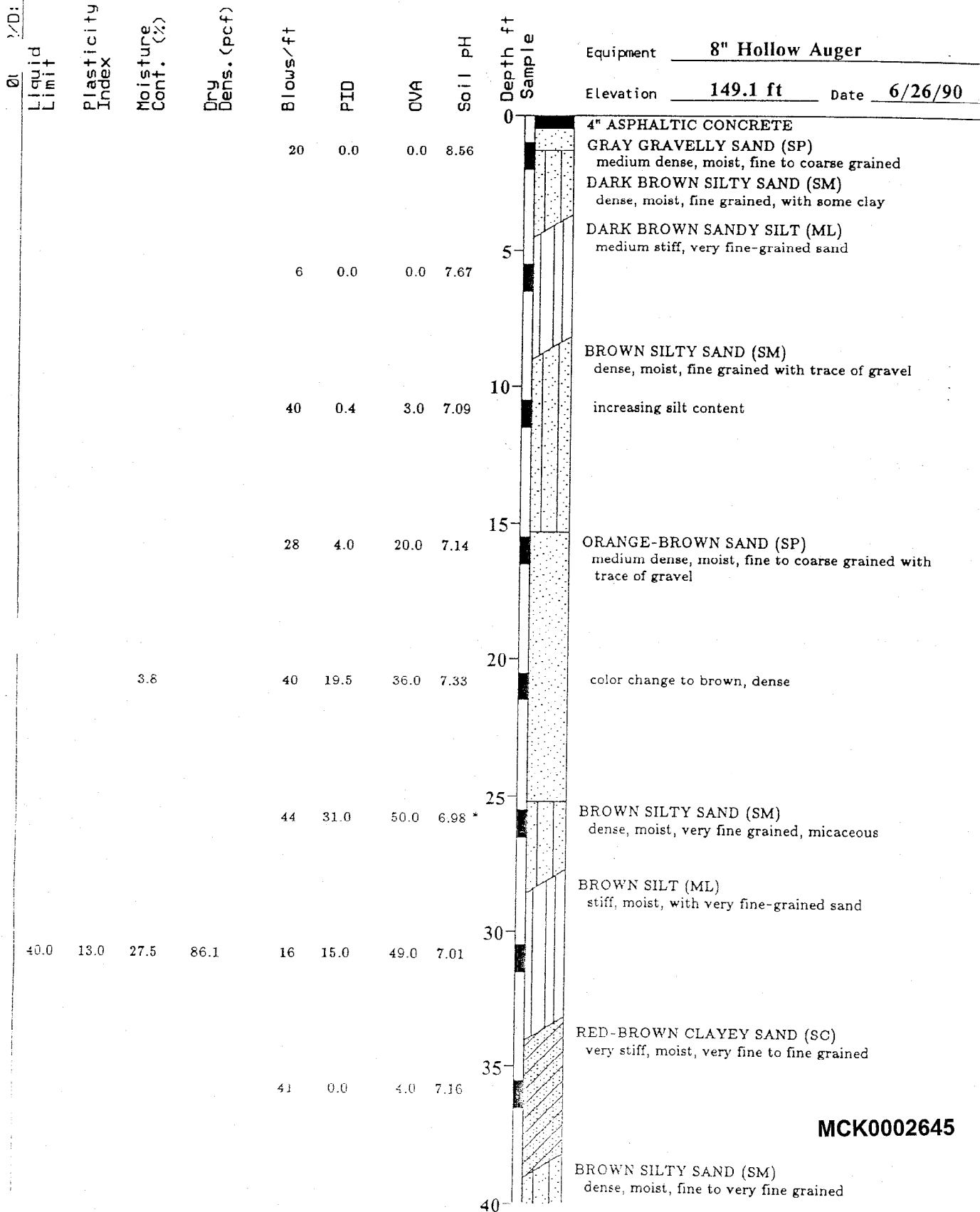
17333, 168.11

1/92

DATE

REVIEW

DATE



Harding Lawson Associates
Engineering and Environmental Services

Log of Boring MK-SB-19 (sheet 1 of 2)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B25

17333, 168.11

APPROVED

[Signature]

DATE
1/92

REVISED

DATE

| Liquid Limit | Plasticity Index | Moisture Cont. (%) | Dry Dens. (pcf) | Blows/ft | PID | OVA | Soil pH | Depth ft | Sample | Equipment | Elevation | Date |
|---|------------------|--------------------|-----------------|----------|-----|-----|---------|----------|--------|-----------------|-----------|---------|
| | | | | 39 | 0.0 | 0.2 | 7.06 * | 40 | | 8" Hollow Auger | 149.1 ft | 6/26/90 |
| <p>Boring terminated at 41.5 feet.
Groundwater not encountered during drilling.
Boring backfilled with bentonite-cement grout on 6/26/90.</p> | | | | | | | | | | | | |
| | | | | | | | | | | 45 | | |
| | | | | | | | | | | 50 | | |
| | | | | | | | | | | 55 | | |
| | | | | | | | | | | 60 | | |
| | | | | | | | | | | 65 | | |
| | | | | | | | | | | 70 | | |
| | | | | | | | | | | 75 | | |
| | | | | | | | | | | 80 | | |

MCK0002646



Harding Lawson Associates
Engineering and Environmental Services

Log of Boring MK-SB-19 (sheet 2 of 2)

McKesson Corporation Property
Santa Fe Springs, California

B25a

00 2/D:

Top of Casing 149.52 ft

Equipment 8 & 10" Hollow Auger

Elevation 149.8 ft Date 7/13/90

(See Plate B48 for
Wellhead
Construction)

10" dia. Borehole

4" dia. Blank
PVC Casing

Bentonite-Cement
Grout

| Blows/ft | PID | OVA | Soil pH |
|----------|------|------|---------|
| 12 | 0.0 | 0.0 | 7.25 |
| 9 | 7.0 | 7.2 | 7.55 |
| 17 | 2.0 | 8.2 | 7.20 * |
| 41 | 1.0 | 13.0 | 7.42 |
| >50 | 7.0 | 34.0 | 7.78 * |
| 40 | 2.0 | 10.0 | 7.18 |
| 18 | 20.0 | 22.0 | 7.21 |
| 44 | 3.0 | 5.6 | 7.09 |

Depth ft
Sample

DARK BROWN SILTY SAND (SM)
dense, moist, fine grained with some gravel

loose, very fine to fine grained with trace of
medium grained, micaceous

color change to red-brown

RED-BROWN GRAVELLY SAND (SP)
dense, moist, medium to coarse grained with some
silt

very dense, decreasing gravel content

DARK BROWN SANDY SILT (ML)
dense, moist, very fine-grained sand with trace of
fine-grained sand, micaceous, highly mottled

medium dense, with trace of medium-grained sand

ORANGE SANDY CLAY (CL)
hard, moist, very fine- to fine-grained sand, highly
mottled

MCK0002647



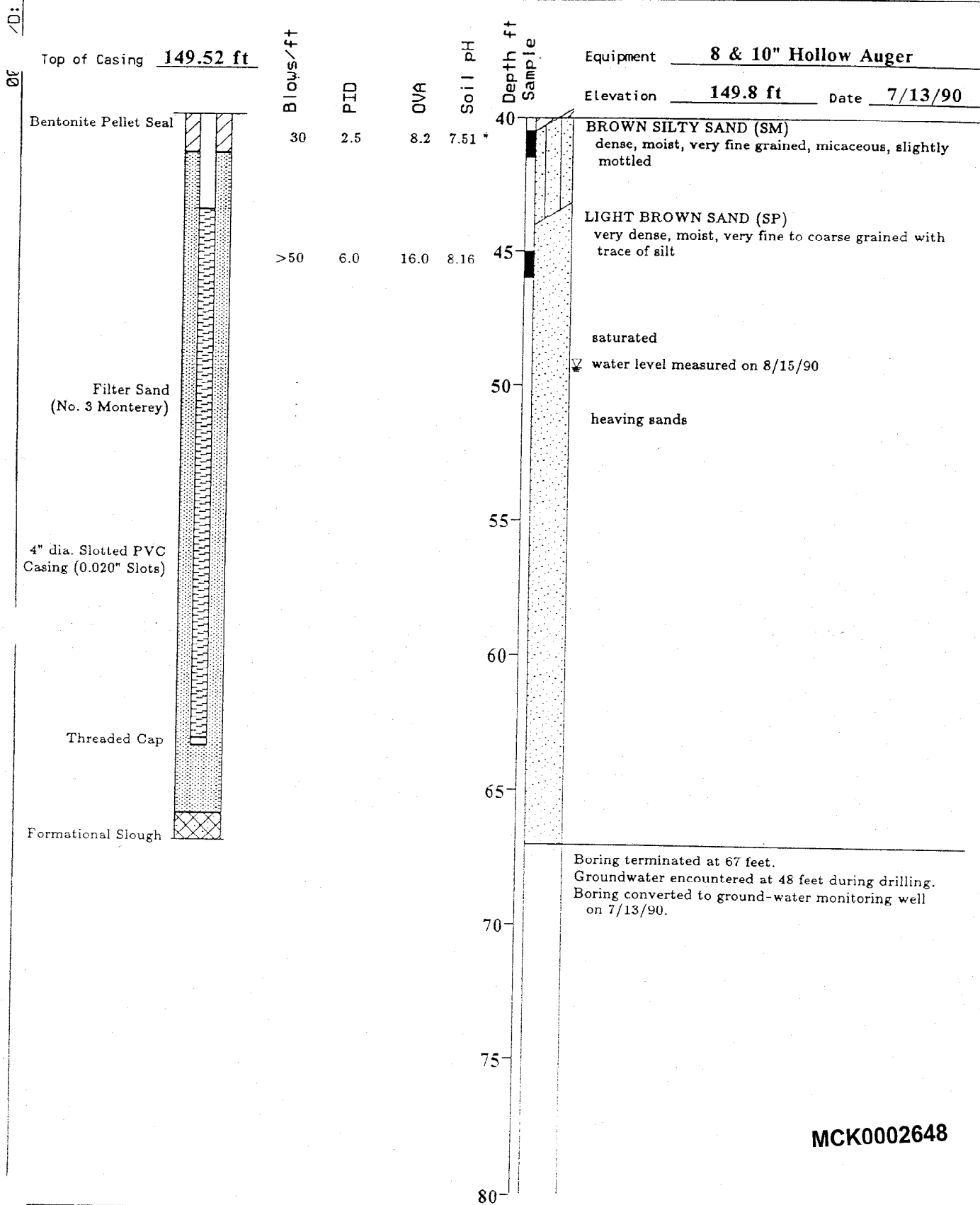
Harding Lawson Associates
Engineering and Environmental Services

Log of Boring MK-SB-20 (sheet 1 of 2)

McKesson Corporation Property
Santa Fe Springs, California

B26

| DRAWN | JOB NUMBER | APPROVED | DATE | REV SET | DATE |
|-------|--------------|----------|------|---------|------|
| HK | 17333,168.11 | TRK | 1/92 | | |

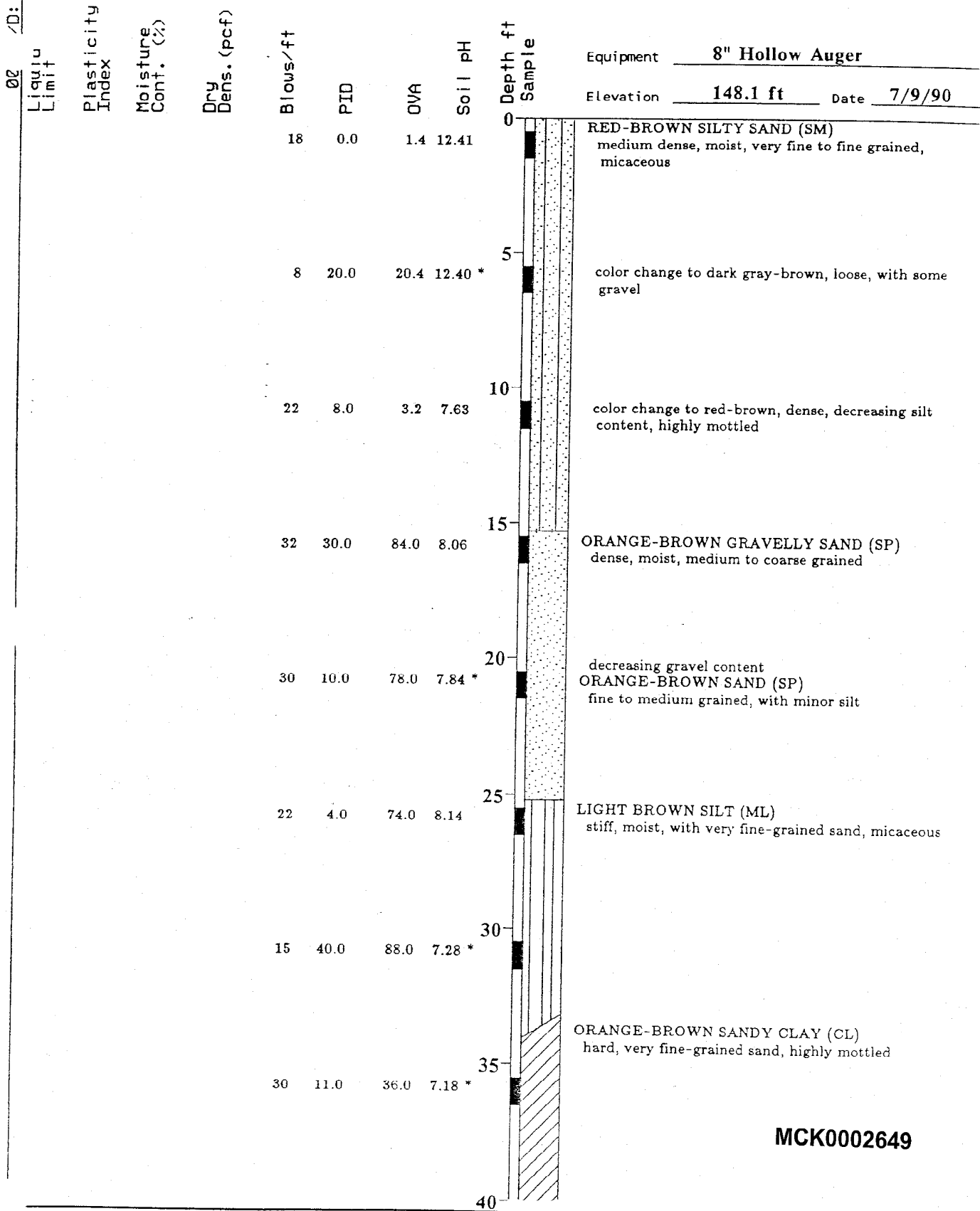


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Log of Boring MK-SB-20 (sheet 2 of 2)

McKesson Corporation Property
Santa Fe Springs, California

B26a



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Log of Boring MK-SB-21 (sheet 1 of 2)

McKesson Corporation Property
Santa Fe Springs, California

B27

| Liquid Limit | Plasticity Index | Moisture Cont. (%) | Dry Dens. (pcf) | Blows/ft | PID | OVA | Soil pH | Depth ft | Sample | Equipment | Elevation | Date |
|--------------|------------------|--------------------|-----------------|----------|-----|-----|---------|----------|--|-----------------|-----------|--------|
| | | | | 46 | | | 6.58 | 40 | | 8" Hollow Auger | 148.1 ft | 7/9/90 |
| | | | | | | | | 45 | GRAY-BROWN SAND (SP)
dense, moist, very fine to fine grained | | | |
| | | | | | | | | 50 | Boring terminated at 46 feet.
Groundwater not encountered during drilling.
Boring backfilled with bentonite-cement grout on 7/11/90. | | | |
| | | | | | | | | 55 | | | | |
| | | | | | | | | 60 | | | | |
| | | | | | | | | 65 | | | | |
| | | | | | | | | 70 | | | | |
| | | | | | | | | 75 | | | | |
| | | | | | | | | 80 | | | | |

MCK0002650



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Log of Boring MK-SB-21 (sheet 2 of 2)
McKesson Corporation Property
Santa Fe Springs, California

B27a

| | | | | | |
|-------------|-----------------------------|-----------------|--------------|-----------|------|
| DRAWN
HK | JOB NUMBER
17333, 168.11 | APPROVED
THK | DATE
1/92 | REVISIONS | DATE |
|-------------|-----------------------------|-----------------|--------------|-----------|------|

2/D:

0

Top of Casing 149.16 ft(See Plate B47 for
Wellhead
Construction)

10" dia. Borehole

4" dia. Blank
PVC CasingBentonite-Cement
Grout

Blows/ft

PTD

OVA

Soil pH

Depth ft
Sample

Equipment

8 & 10" Hollow Auger

Elevation

148.6 ft

Date

7/5/90

10 0.0 20.0 7.72

0

4" GRAVEL BASE

DARK RED-BROWN SILTY SAND (SM)

medium dense, moist, very fine to medium grained
with minor gravel

8 50.0 120.0 6.96

5

color change to dark brown, loose, very fine
grained

22 18.0 56.0 7.40

10

color change to red-brown, medium dense, very
fine to fine grained

20 80.0 560.0 8.17

15

DARK RED-BROWN GRAVELLY SAND (SP)

medium dense, moist, fine to coarse grained with
trace of silt, micaceous

24 170.0 500.0 7.97

20

color change to orange, decreasing gravel content

40 110.0 >1000 7.87

25

increasing gravel content

LIGHT BROWN SILT (ML)

very stiff, moist, with some fine-grained sand,
micaceous

19 40.0 480.0 7.32

30

ORANGE-BROWN SANDY CLAY (CL)

very stiff, very fine-grained sand with trace of
fine-grained sand, highly mottled

17 50.0 280.0 7.47

35

BROWN SILTY SAND (SM)

medium dense, moist, very fine to fine grained with

40

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Log of Boring MK-SB-23 (sheet 1 of 2)

PLATE

McKesson Corporation Property
Santa Fe Springs, California

B28

DRAWN

HK

JOB NUMBER
17333, 168.11APPROVED
TALDATE
1/92

REVISED

DATE

0' 10' 20' 30' 40' 50' 60' 70' 80'

Top of Casing 149.16 ft

Equipment 8 & 10" Hollow Auger

Elevation 148.6 ft Date 7/5/90

Bentonite Pellet Seal

| Blows/ft | PID | OVA | Soil pH |
|----------|-------|-------|---------|
| 24 | 160.0 | >1000 | 7.19 * |
| 19 | 140.0 | >1000 | 6.94 |
| 35 | 62.0 | >1000 | 7.11 |

Depth ft
Sample

trace of medium grained, moderately mottled, micaceous

water level measured on 8/15/90

LIGHT BROWN SAND (SP)

dense, saturated, very fine to medium grained with some coarse grained, micaceous

Filter Sand
(No. 3 Monterey)

4" dia. Slotted PVC
Casing (0.020" Slots)

heaving sands

Threaded Cap

Boring terminated at 66 feet.
Groundwater encountered at 48 feet during drilling.
Boring converted to ground-water monitoring well
on 7/10/90.

MCK0002652

80'



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Log of Boring MK-SB-23 (sheet 2 of 2)

McKesson Corporation Property
Santa Fe Springs, California

B28a

DATE

HK

JOB NUMBER

17333, 168.11

APPROVED

THK

DATE

1/92

REVISION

DATE

001

Top of Casing 148.43 ft

(See Plate B48 for Wellhead Construction)

12" dia. Mild-Steel Conductor Casing

16" dia. Bucket Auger Borehole

Bentonite Volclay Grout

9-7/8" dia. Borehole

PTD 55.0
OVA 60.0

20.0 90.0

4.0 54.0

7.0 200.0

17.0 140.0

20.0 400.0

25.0 >1000

22.0 700.0

1.2 53.0

1.4 57.0

3.0 61.0

Soil pH

Depth ft
Sample

Equipment Bucket / Mud

Elevation 148.8 ft Date 2/5/91

4" ASPHALTIC CONCRETE

DARK BROWN SILTY SAND (SM)
moist, fine grained with some medium- and coarse-grained sand, micaceous
BROWN SILT WITH SAND (ML)
moist, fine-grained sand, micaceous

RED-BROWN SILTY SAND (SM)
moist, fine grained with trace of medium-grained sand, mottled and oxidized

increasing gravel content
decreasing silt content

YELLOW TO RED-BROWN SAND (SP)
moist, fine to coarse grained with some subrounded gravel

BROWN SILT WITH SAND (ML)
moist, fine-grained sand, micaceous

MCK0002653

16-inch-diameter bucket auger boring terminated at 32 feet.

12-inch-diameter mild-steel conductor casing installed to 33 feet.

Boring continued below 32 feet with a 4-inch-diameter Christensen wireline coring system.

color change to dark brown
BROWN SANDY SILT (ML)
moist, fine-grained sand, micaceous with trace of clay

increasing sand content
RED-BROWN SANDY CLAY (CL)
fine-grained sand, mottled

increasing sand content
RED-BROWN SANDY SILT (ML)
very stiff, moist, fine-grained sand, mottled

40



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Log of Boring MK-SB23A (sheet 1 of 4)

McKesson Corporation Property
Santa Fe Springs, California

PLATE

B29

| | | | | | |
|-------------|-----------------------------|-----------------|--------------|---------|------|
| DRAWN
HK | JOB NUMBER
17333, 168.11 | APPROVED
TAX | DATE
1/92 | REVISED | DATE |
|-------------|-----------------------------|-----------------|--------------|---------|------|

02

Top of Casing 148.43 ft

Equipment Bucket / Mud

Elevation 148.8 ft Date 2/5/91

16" dia. Bucket
Auger Borehole

Bentonite Volclay
Grout

4" dia. Blank
PVC Casing

| PID | OVA |
|------|-------|
| 7.0 | 86.0 |
| 38.0 | 480.0 |
| 1.8 | 15.0 |
| 5.5 | 48.0 |
| 1.8 | 22.0 |
| 11.0 | 97.0 |
| 0.2 | 2.0 |
| 0.0 | 0.8 |
| 0.0 | 0.1 |
| 0.2 | 1.0 |
| 0.0 | 0.4 |
| 0.0 | 0.4 |
| 0.0 | 0.2 |
| 0.2 | 0.1 |

Soil pH
Depth ft
Sample

increasing sand content

2-inch-thick sand lenses

color change to gray-brown, mottled
decreasing sand content
BROWN SAND (SP)
moist to wet, fine to medium grained with minor silt
water level measured on 4/11/91

increasing silt content
color change to gray, no silt, saturated

predominantly fine-grained sand, micaceous

color change to brown, fine to medium grained
with trace of gravel

2- to 3-inch-thick silt lenses interlaminated with
fine-grained sand

predominantly fine-grained sand with trace of
medium-grained sand, interlaminated with silt
lenses

fine to medium grained
trace of gravel

decreasing medium-grained sand content

fine to coarse grained
some gravel

fine to medium grained with trace of
coarse-grained sand

BROWN AND RED-BROWN SILT (ML)
wet, with some fine-grained sand, oxidized along
fracture and bedding planes

MCK0002654



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Log of Boring MK-SB23A (sheet 2 of 4)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B29a

| | | | | | |
|-------------|-----------------------------|-----------------|--------------|---------|------|
| DRAWN
HK | JOB NUMBER
17333, 168.11 | APPROVED
THK | DATE
1/92 | REVISED | DATE |
|-------------|-----------------------------|-----------------|--------------|---------|------|

00: 00

Top of Casing 148.43 ft

Equipment Bucket / Mud
Elevation 148.8 ft Date 2/5/91

9-7/8" dia. Borehole

Bentonite Pellet Seal

| PID | OVA |
|-----|-----|
| 0.0 | 0.0 |
| 0.0 | 0.0 |
| 0.0 | 0.0 |
| 0.0 | 0.0 |
| 0.0 | 0.0 |
| 0.0 | 2.8 |
| 0.0 | 0.7 |
| 0.0 | 0.8 |
| 0.0 | 0.5 |
| 0.0 | 0.3 |

Soil pH
Depth ft
Sample

80
85
90
95
100
105
110
115
120

increasing sand content

increase in sand content
BROWN SILTY SAND (SM)
saturated, fine grained

decrease in silt content
BROWN SAND (SP)
saturated, very fine to fine grained with some silt,
micaceous
trace of gravel, increasing silt content

decreasing silt content
1-foot-thick silt lens with trace of gravel
fine grained with some medium-grained sand,
micaceous
color change to gray-brown
3-inch-thick silt lens
fine- to medium-grained sand with trace of silt

increasing silt content, fine-grained sand
inferred gravelly horizons from drilling conditions
drillers reports very loose material

fine grained, with trace of medium-grained sand,
micaceous
color change to brown
predominantly fine- to medium-grained sand with
some silt
fine grained, no silt

MCK0002655



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Log of Boring MK-SB23A (sheet 3 of 4)
McKesson Corporation Property
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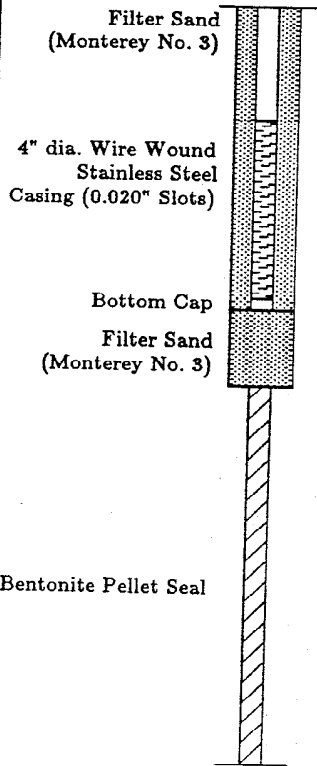
PLATE

B29b

| | | | | | |
|-------------|-----------------------------|-----------------|--------------|---------|------|
| DRAWN
HK | JOB NUMBER
17333, 168.11 | APPROVED
THK | DATE
1/92 | REVISED | DATE |
|-------------|-----------------------------|-----------------|--------------|---------|------|

00 00

Top of Casing 148.43 ft



| PID | OVA | Soil pH | Depth ft
Sample | Equipment | Bucket / Mud |
|-----|-----|---------|--------------------|-----------|---|
| | | | | Elevation | 148.8 ft Date 2/5/91 |
| 0.0 | 1.0 | | 120 | | fine to medium grained with trace of gravel |
| 0.0 | 0.6 | | | | with some silt, no gravel |
| 0.0 | 0.2 | | 125 | | increasing silt content |
| | | | | | BROWN SANDY CLAY (CL)
wet, fine-grained sand, micaceous |
| 0.0 | 0.0 | | 130 | | BROWN SILT WITH SAND (ML)
saturated, fine-grained sand, micaceous |
| | | | | | BROWN SILTY SAND (SM)
saturated, fine grained, micaceous |
| | | | 135 | | BROWN SAND (SP)
saturated, fine grained with trace of silt, micaceous |
| 0.0 | 0.0 | | 140 | | 4-inch-diameter Christensen wireline continuous cored borehole terminated at 140 feet. Groundwater encountered at approximately 50 feet during drilling. 4-inch-diameter borehole backfilled from 130 to 140 feet with bentonite-pellet seal. 4-inch-diameter borehole overreamed with a 9-7/8 inches in diameter bit to 130 feet and converted to groundwater monitoring well on 2/5/91. |
| | | | 145 | | |
| | | | 150 | | |
| | | | 155 | | |
| | | | 160 | | |

MCK0002656



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Log of Boring MK-SB23A (sheet 4 of 4)

PLATE

McKesson Corporation Property
Santa Fe Springs, California

B29c

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JOB NUMBER

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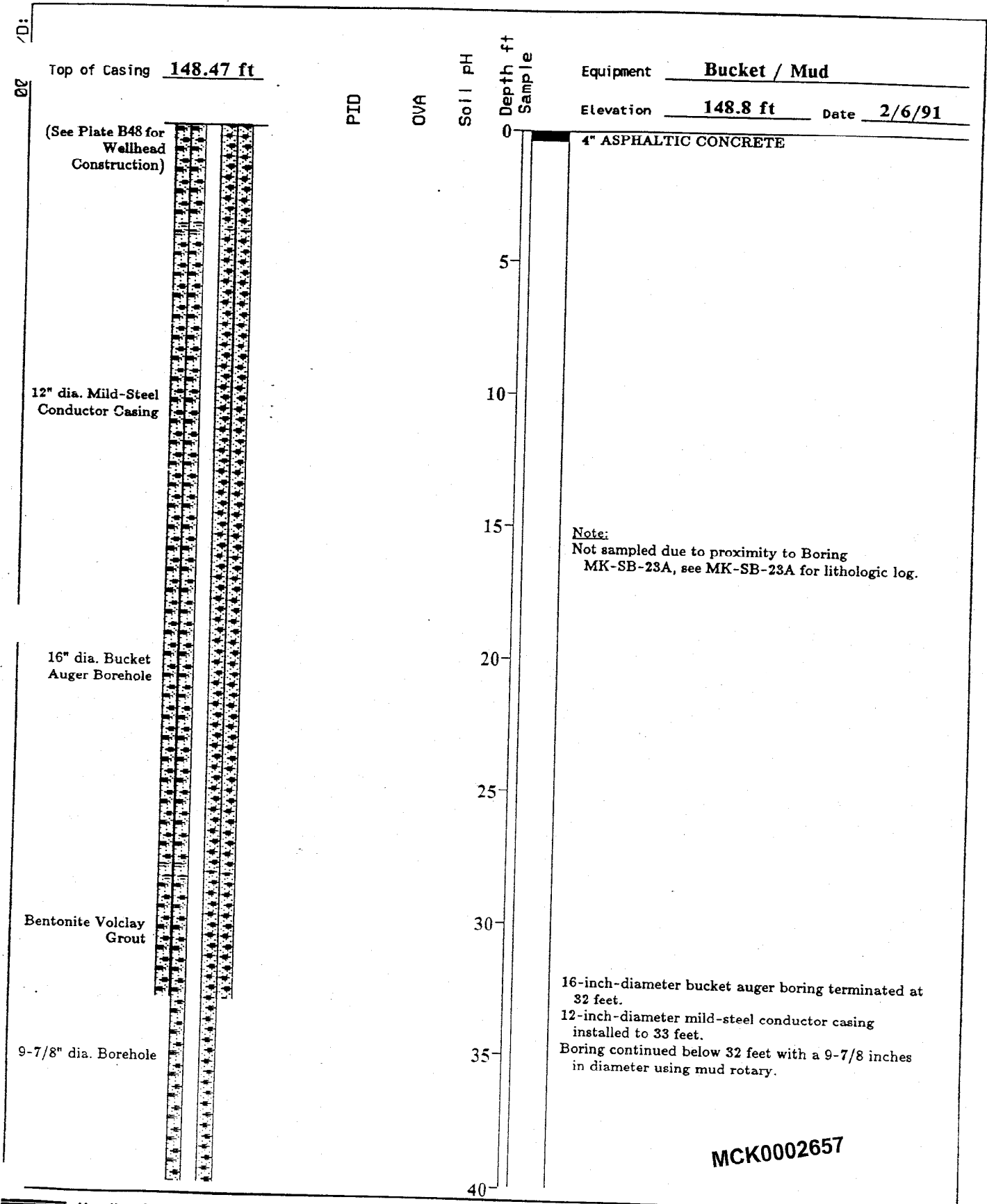
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DATE

1/92

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DATE



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Log of Boring MK-SB23B (sheet 1 of 3)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B30

D: 00'

Top of Casing 148.47 ft

Blows/ft

PID

OVA

Soil pH

Depth ft
Sample

Equipment

Bucket / Mud

Elevation

148.8 ft

Date

2/6/91

16" dia. Bucket
Auger Borehole

Bentonite Volclay
Grout

9-7/8" dia. Borehole

4" dia. Blank
PVC Casing

▽ water level measured on 4/11/91

MCK0002658

80



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Log of Boring MK-SB23B (sheet 2 of 3)

McKesson Corporation Property
Santa Fe Springs, California

PLATE

B30a

DRAWN

JOB NUMBER

17333, 168.11

APPROVED

THK

DATE

1/92

REVISED

DATE

HK

00 00

Top of Casing 148.47 ft

Blows/ft

PID

OVA

Soil pH

Depth ft
Sample

Equipment

Bucket / Mud

Elevation

148.8 ft

Date 2/6/91

Bentonite Pellet Seal

Filter Sand
(Monterey No. 3)

4" dia. Wire Wound
Stainless Steel
Casing (0.020" Slots)

Bottom Cap

80

85

90

95

100

105

110

115

120

Boring terminated at 97 feet.
Groundwater encountered at approximately 50 feet
during drilling.
Boring converted to ground-water observation well
on 2/6/91.

MCK0002659



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Log of Boring MK-SB23B (sheet 3 of 3)

PLATE

McKesson Corporation Property
Santa Fe Springs, California

B30b

DRAWN

HK

JOB NUMBER

17333, 168.11

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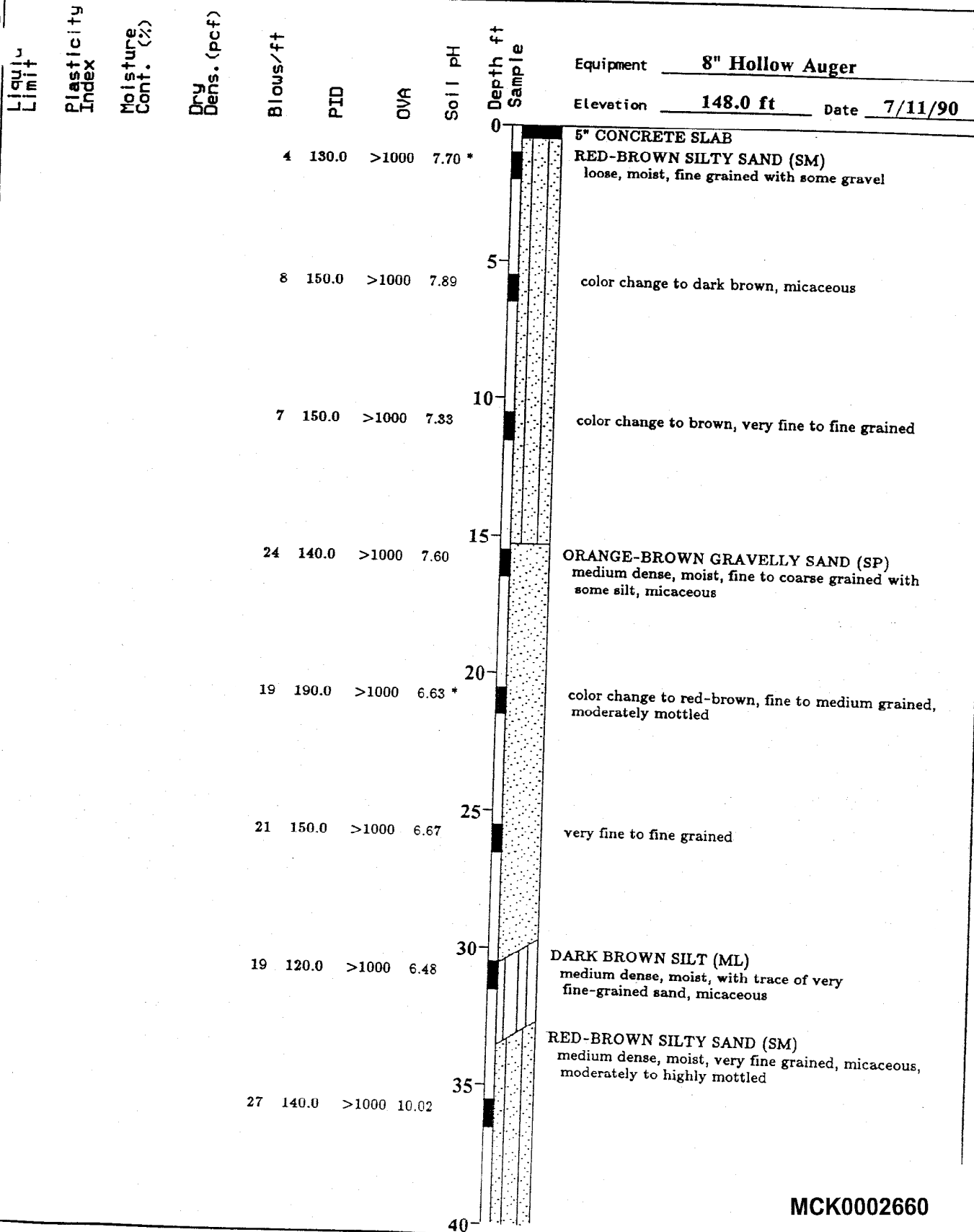
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DATE

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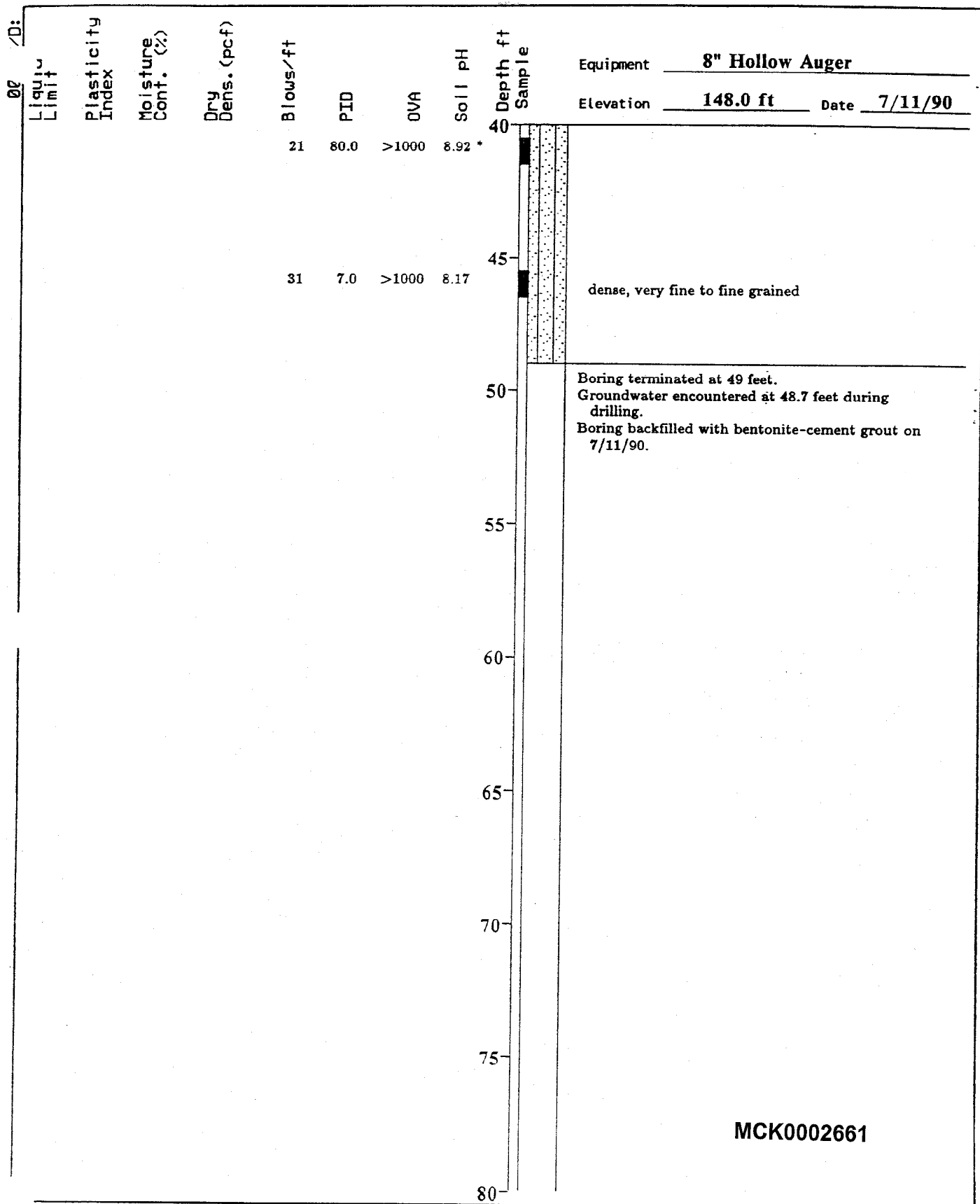
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Log of Boring MK-SB-24 (sheet 1 of 2)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B31

| | | | | | |
|-------------|-----------------------------|-----------------|--------------|---------|------|
| DRAWN
HK | JOB NUMBER
17333, 168.11 | APPROVED
TAC | DATE
1/92 | REVISED | DATE |
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Log of Boring MK-SB-24 (sheet 2 of 2)

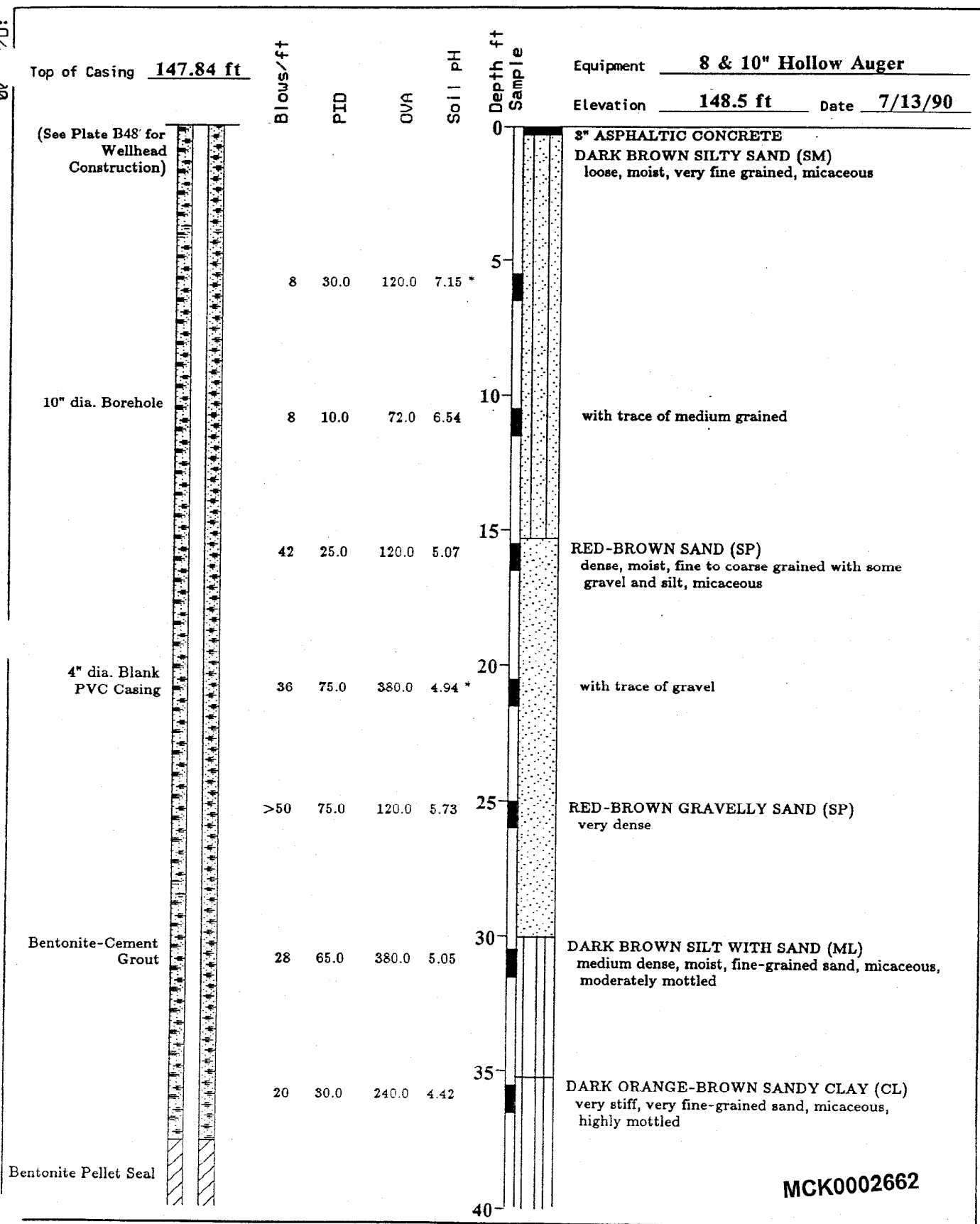
PLATE

McKesson Corporation Property
Santa Fe Springs, California

B31a

| | | | | | |
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| DRAWN | JOB NUMBER | APPROVED | DATE | REVISED | DATE |
| HK | 17333,168.11 | TAK | 1/92 | | |

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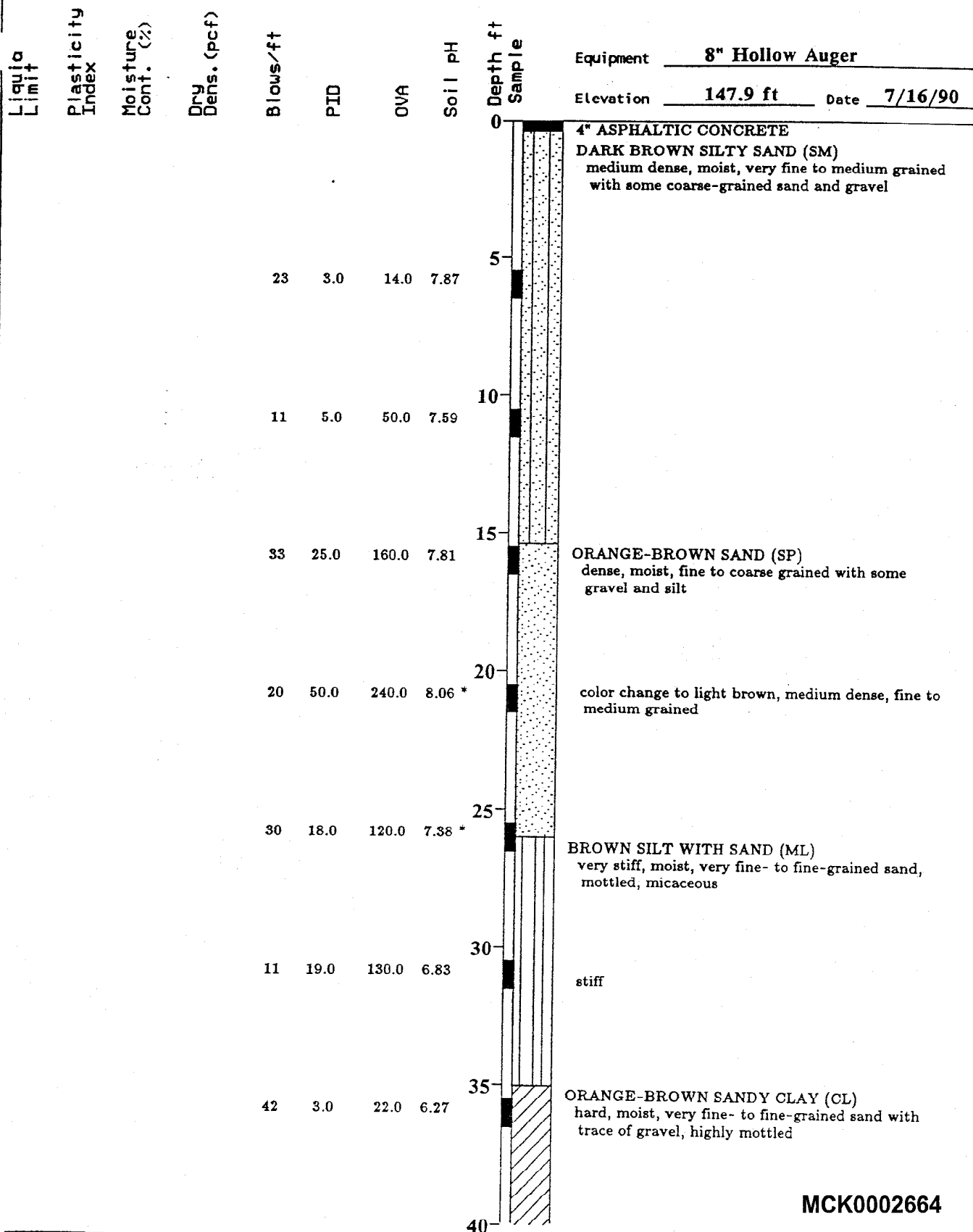
Log of Boring MK-SB-25 (sheet 1 of 2)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B32

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|-------------|----------------------------|-----------------|--------------|---------|------|
| DRAWN
HK | JOB NUMBER
17333,168.11 | APPROVED
TAC | DATE
1/92 | REVISED | DATE |
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Log of Boring MK-SB-26 (sheet 1 of 2)

PLATE

McKesson Corporation Property
Santa Fe Springs, California

B33

DRAWN

HK

JOB NUMBER

17333, 168.11

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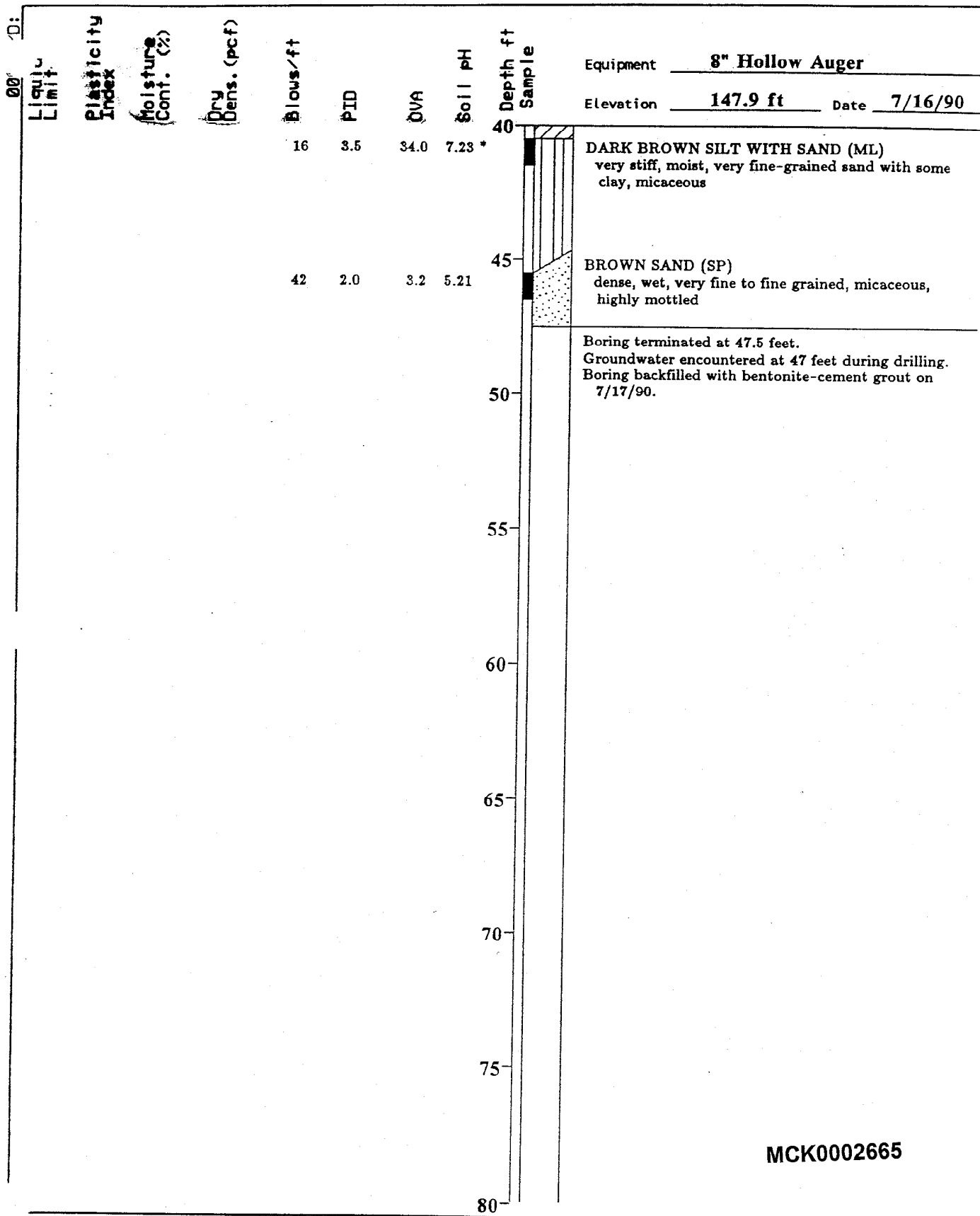
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DATE



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Log of Boring MK-SB-26 (sheet 2 of 2)

PLATE

McKesson Corporation Property
Santa Fe Springs, California

B33a

| | | | | | |
|-------|---------------|----------|------|---------|------|
| DRAWN | JOB NUMBER | APPROVED | DATE | REVISED | DATE |
| HK | 17333, 168.11 | THK | 1/92 | | |

00 1/2

| Liqui
Limit | Plasticity
Index | Moisture
Cont. (%) | Dry
Dens. (pcf) | Blows/ft | PID | OVA | Soil pH | Depth ft
Sample | Equipment | Elevation | Date |
|----------------|---------------------|-----------------------|--------------------|----------|-------|-------|---------|--------------------|---|-----------|---------|
| | | | | | | | | 0 | 8" Hollow Auger | 147.6 ft | 7/16/90 |
| | | | | | | | | 0 | 4" ASPHALTIC CONCRETE | | |
| | | | | | | | | 5 | DARK GRAY-BROWN SILTY SAND (SM) | | |
| | | | | 6 | 40.0 | 28.0 | 8.76 | | loose, moist, very fine to fine grained, micaceous | | |
| | | | | | | | | 10 | | | |
| | | | | 9 | 13.0 | 30.0 | 8.36 | | color change to dark brown, with trace of coarse grained | | |
| | | | | | | | | 15 | | | |
| | | | | 10 | 18.5 | 12.0 | 8.56 | | decreasing silt content | | |
| | | | | | | | | 20 | | | |
| | | | | 35 | 130.0 | 580.0 | 8.45 * | | ORANGE-BROWN SAND (SP) | | |
| | | | | | | | | | dense, moist, very fine grained with trace of fine grained, micaceous | | |
| | | | | | | | | 25 | | | |
| | | | | 40 | 130.0 | 240.0 | 7.30 | | LIGHT BROWN GRAVELLY SAND (SP) | | |
| | | | | | | | | | fine to coarse grained | | |
| | | | | | | | | 30 | | | |
| | | | | 31 | 40.0 | 260.0 | 7.57 * | | RED-BROWN SILTY SAND (SM) | | |
| | | | | | | | | | dense, moist, very fine to fine grained with trace of medium grained, slightly mottled, micaceous | | |
| | | | | | | | | 35 | | | |
| | | | | 19 | 50.0 | 340.0 | 7.32 | | fine grained | | |
| | | | | | | | | 40 | | | |
| | | | | | | | | | ORANGE-BROWN SANDY CLAY (CL) | | |
| | | | | | | | | | very stiff, moist, very fine-grained sand with some gravel, highly mottled | | |
| | | | | | | | | | RED-BROWN SILTY SAND (SM) | | |
| | | | | | | | | | medium dense, moist, very fine to fine grained with | | |

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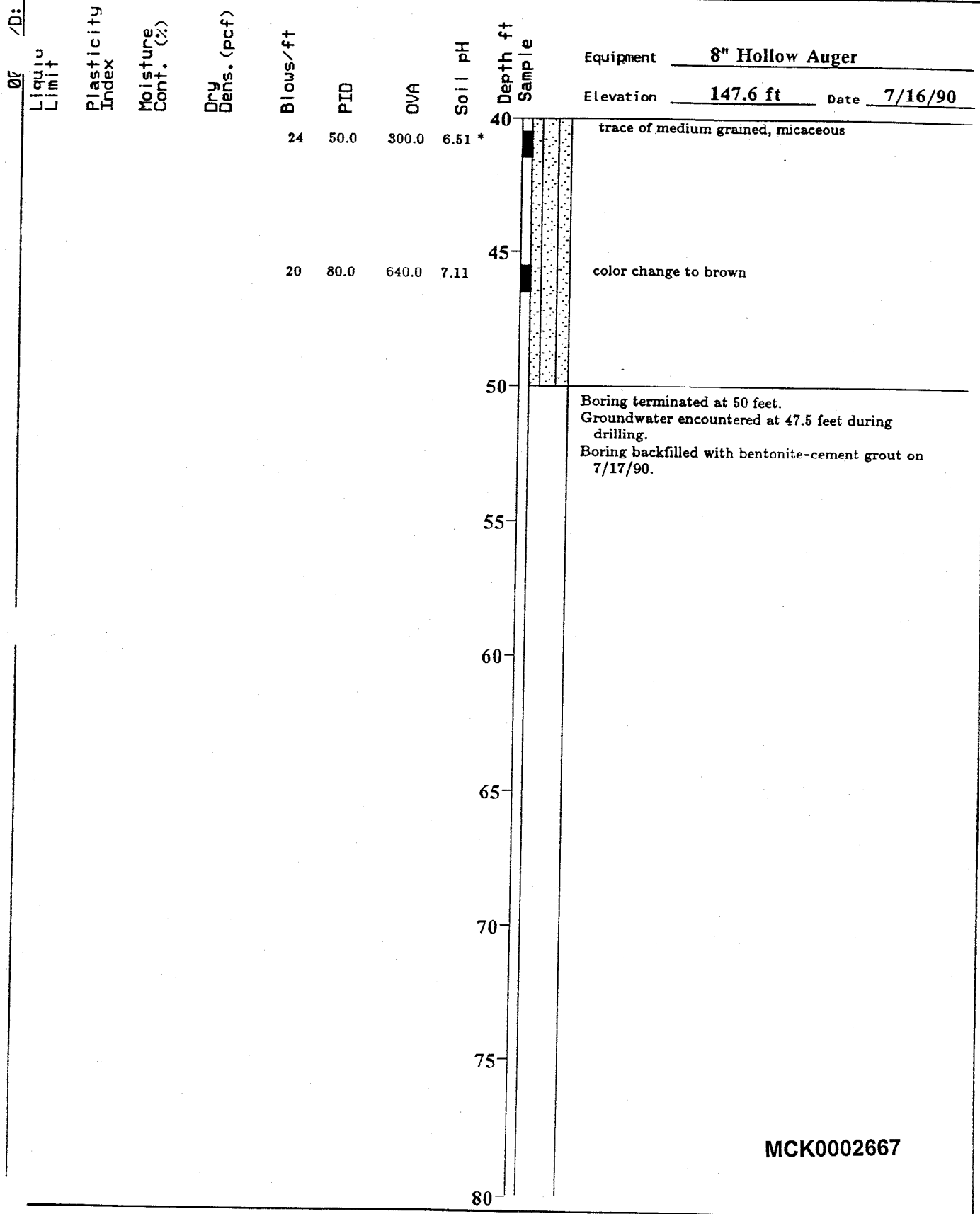
Log of Boring MK-SB-27 (sheet 1 of 2)

PLATE

McKesson Corporation Property
Santa Fe Springs, California

B34

| | | | | | |
|-------|---------------|----------|------|---------|------|
| DRAWN | JOB NUMBER | APPROVED | DATE | REVISED | DATE |
| HK | 17333, 168.11 | TAC | 1/92 | | |



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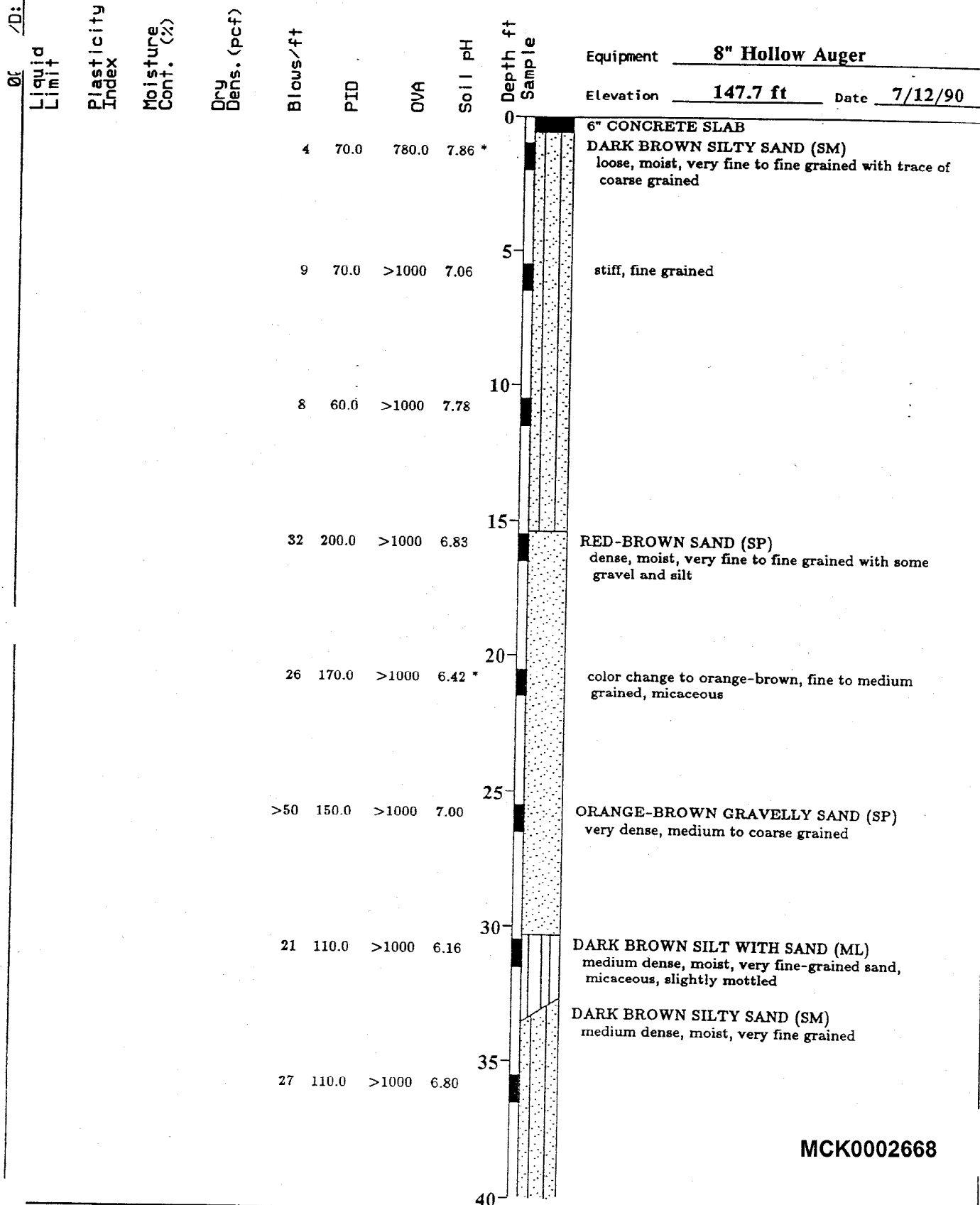
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Log of Boring MK-SB-27 (sheet 2 of 2)

McKesson Corporation Property
Santa Fe Springs, California

PLATE

B34a



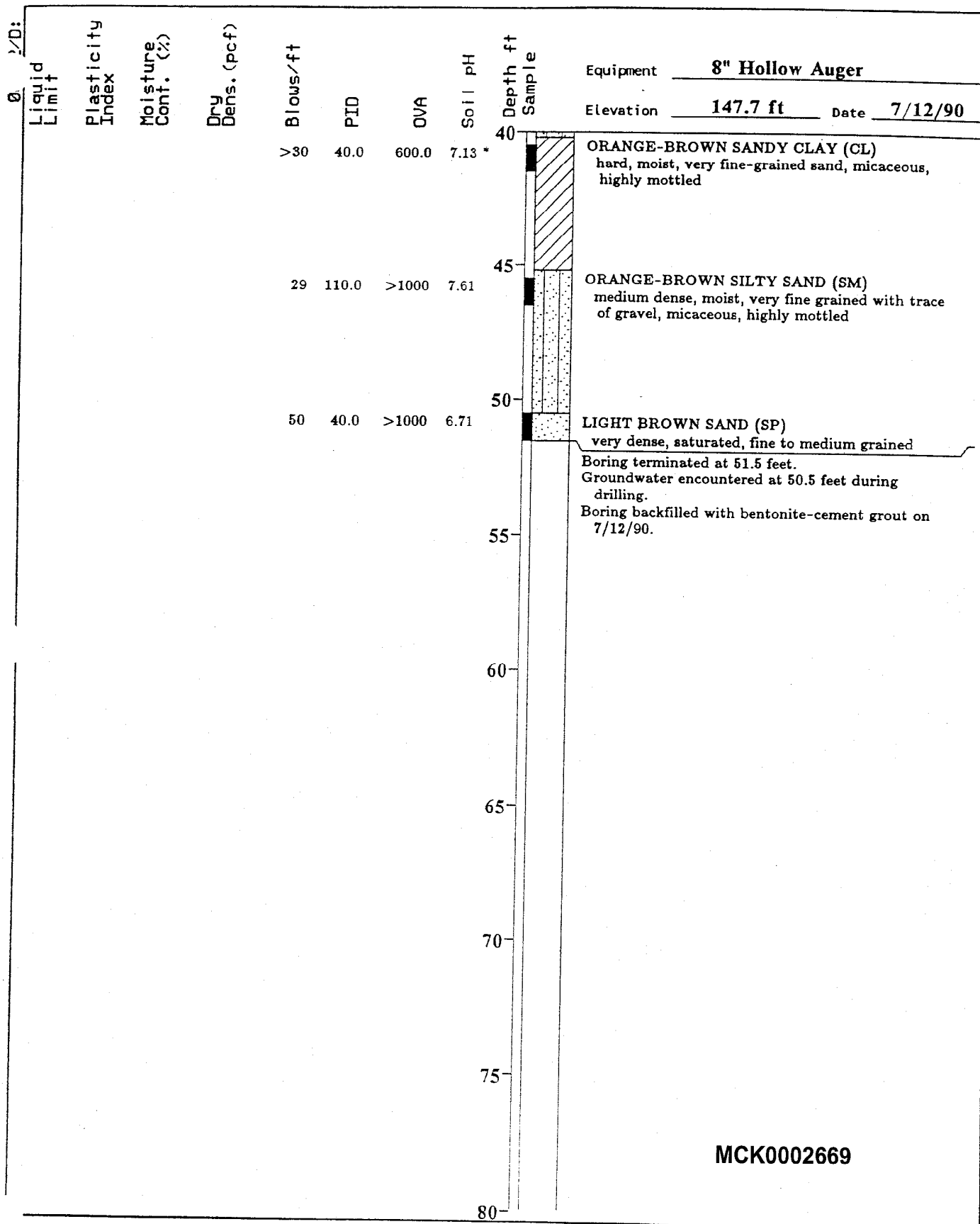
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Log of Boring MK-SB-30 (sheet 1 of 2)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B35

| | | | | | |
|-------|---------------|----------|------|---------|------|
| DRAWN | JOB NUMBER | APPROVED | DATE | REVISED | DATE |
| HK | 17333, 168.11 | TAC | 1/92 | | |



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Log of Boring MK-SB-30 (sheet 2 of 2)

McKesson Corporation Property
Santa Fe Springs, California

PLATE

B35a

DRAWN

HK

JOB NUMBER

17333, 168.11

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THK

DATE

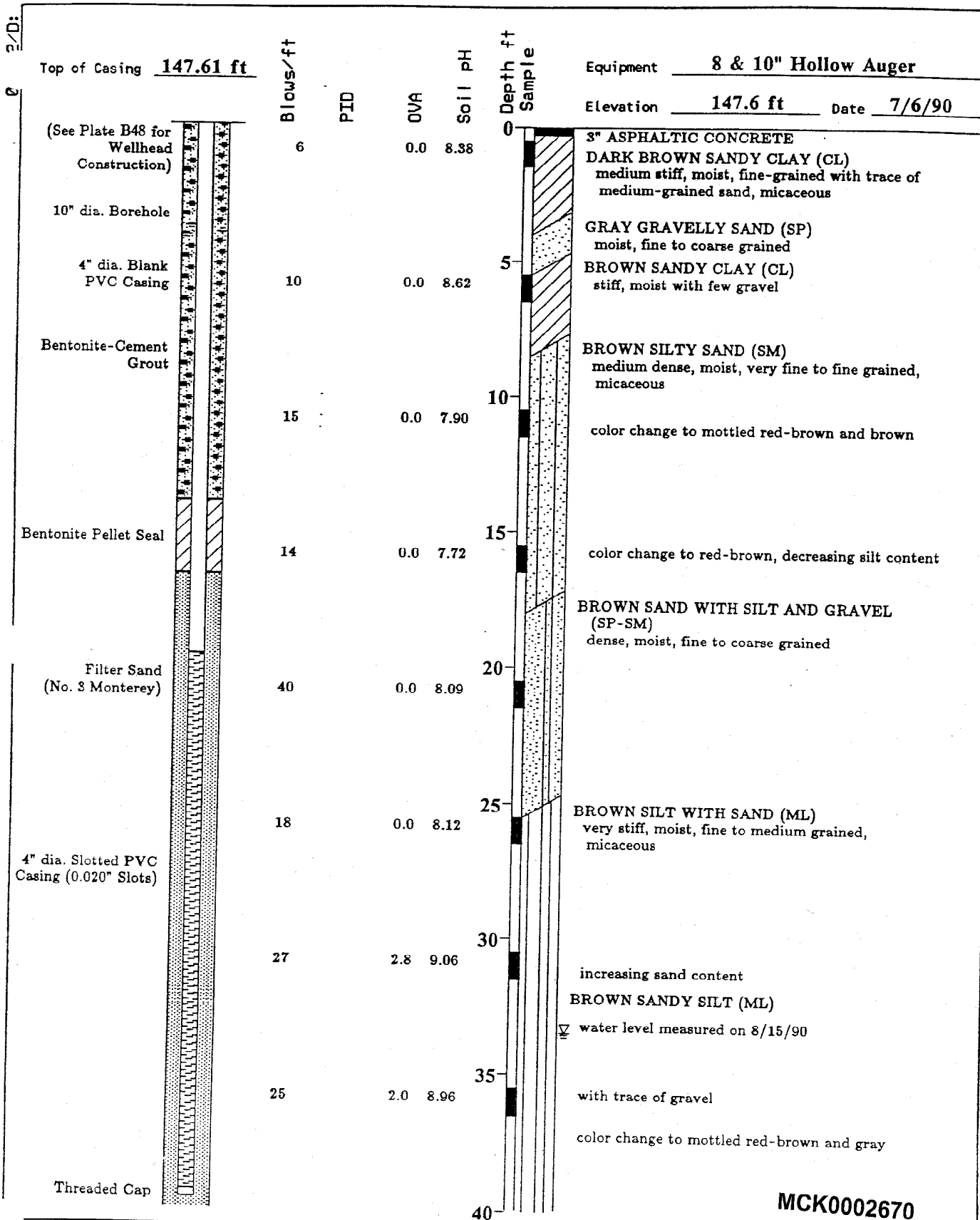
1/92

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DATE

2/D:

9



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Log of Boring MK-SB-32 (sheet 1 of 2)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B36

| | | | | | |
|-------------|-----------------------------|-----------------|--------------|---------|------|
| DRAWN
HK | JOB NUMBER
17333, 168.11 | APPROVED
THK | DATE
1/92 | REVISED | DATE |
|-------------|-----------------------------|-----------------|--------------|---------|------|

or 2/D:

Top of Casing 147.61 ft

Fomrational Slough



Blows/ft

15

PID

OVA

0.3 10.07

Soil pH

Depth ft
Sample

40

45

50

55

60

65

70

75

80

Equipment 8 & 10" Hollow Auger

Elevation 147.6 ft Date 7/6/90

BROWN LEAN CLAY WITH SAND (CL)
very stiff, moist, very fine-grained sand, highly mottled

Boring terminated at 41.5 feet.
Groundwater not encountered during drilling.
Boring converted to ground-water monitoring well on 7/6/90.

MCK0002671



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Log of Boring MK-SB-32 (sheet 2 of 2)

McKesson Corporation Property
Santa Fe Springs, California

B36a

DRAWN

HK

JOB NUMBER

17333, 168.11

APPROVED

TAK

DATE

1/92

REVISED

DATE

PLATE

0' 1/2'

| Liqui
Limit | Plasticity
Index | Moisture
Cont. (%) | Dry
Dens. (pcf) | Blows/ft | PID | OVA | Soil pH | Depth ft
Sample |
|----------------|---------------------|-----------------------|--------------------|----------|------|-------|---------|--------------------|
| | | | | 6 | 0.0 | 0.7 | 10.32 | 0 |
| | | | | 14 | 2.0 | 0.6 | 8.39 | 5 |
| | | | | 20 | 30.0 | 14.0 | 8.44 | 10 |
| | | | | 29 | 55.0 | 500.0 | 8.35 * | 15 |
| | | | | | | | | 20 |
| | | | | | | | | 25 |
| | | | | | | | | 30 |
| | | | | | | | | 35 |
| | | | | | | | | 40 |

Equipment 8" HSA
Elevation 148.6 ft Date 1/23/91

6" GRAVEL BASE
BROWN SILTY SAND (SM)
loose, moist to wet, fine to medium grained with trace of coarse grained
DARK BROWN SANDY CLAY (CL)
stiff, moist, fine-grained sand with trace of medium- and coarse-grained sand, micaceous
RED-BROWN SILTY SAND (SM)
medium dense, fine to coarse grained
RED-BROWN SAND (SP)
medium dense, moist, fine to coarse grained with trace of gravel, micaceous

Boring terminated at 15.5 feet.
Groundwater not encountered during drilling.
Boring backfilled with bentonite-cement grout on 1/23/91.

MCK0002672



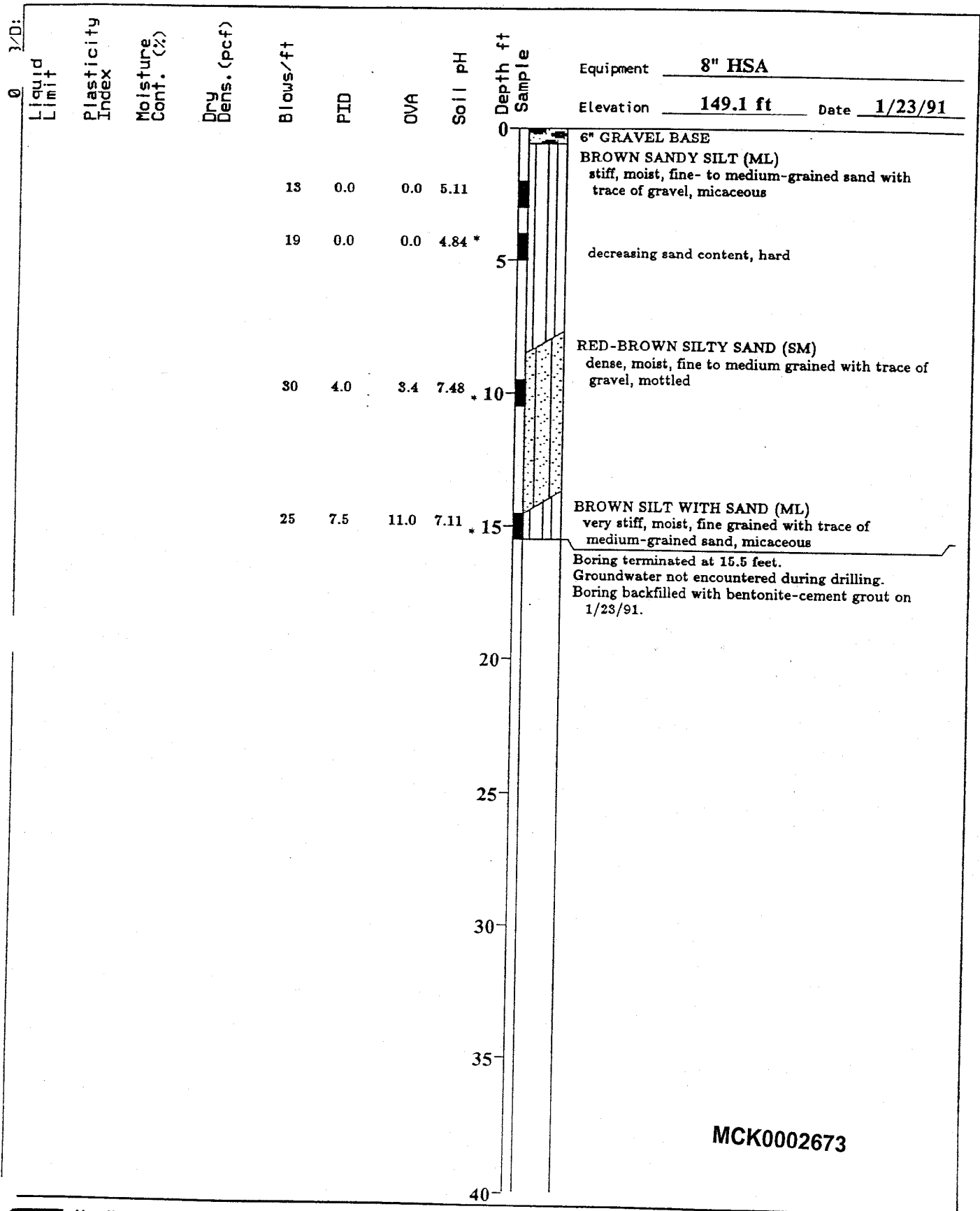
Harding Lawson Associates
Engineering and Environmental Services

Log of Boring MK-SB-33 (sheet 1 of 1)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B37

| | | | | | |
|-------------|-----------------------------|-----------------|--------------|---------|------|
| DRAWN
HK | JOB NUMBER
17333, 168.11 | APPROVED
THK | DATE
1/92 | REVISED | DATE |
|-------------|-----------------------------|-----------------|--------------|---------|------|



Harding Lawson Associates
Engineering and Environmental Services

Log of Boring MK-SB-34 (sheet 1 of 1)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B38

DRAWN

HK

JOB NUMBER

17333, 168.11

APPROVED

JHK

DATE

1/92

REVISED

DATE

3/D:

Liquid
Limit

Plasticity
Index

Moisture
Cont. (%)

Dry
Dens. (pcf)

Blows/ft

PID

OVA

Soil pH

Depth ft
Sample

Equipment 8" HSA

Elevation 148.6 ft Date 1/23/91

12 0.8 0.6 8.00 *

16 5.0 12.0 7.91

38 5.0 16.0 8.16 *

42 100.0 200.0 8.90 *

6" GRAVEL BASE

DARK BROWN SILT WITH SAND (ML)
stiff, moist, fine-grained sand with trace of
subrounded gravel, mottled, micaceous

increasing sand content
trace of medium- and coarse-grained sand

RED-BROWN SILTY SAND (SM)
dense, moist, fine to medium grained

RED-BROWN SAND (SP)
dense, moist, fine to coarse grained with trace of
gravel

Boring terminated at 15 feet.
Groundwater not encountered during drilling.
Boring backfilled with bentonite-cement grout on
1/23/91.

MCK0002674



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Engineering and Environmental Services

Log of Boring MK-SB-35 (sheet 1 of 1)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B39

DRAWN

HK

JOB NUMBER

17333,168.11

APPROVED

THK

DATE

1/92

REVISED

DATE

3/D:

Q

Top of Casing 147.26 ftEquipment 10" HSAElevation 147.6 ft Date 1/23/91(See Plate B48 for
Wellhead
Construction)

10" dia. Borehole

4" dia. Blank
PVC CasingBentonite-Cement
Grout

Bentonite Pellet Seal

| Blows/ft | PID | OVA | Soil pH | Depth ft | Sample |
|----------|------|-------|---------|----------|--------|
| 8 | 0.0 | 0.0 | 8.57 | 0 | |
| 11 | 0.0 | 0.0 | 8.84 | 5 | |
| 26 | 0.0 | 0.0 | 8.69 | 10 | |
| 15 | 0.0 | 0.0 | 8.12 | 15 | |
| 34 | 45.0 | 100.0 | 8.88 | 20 | |
| 36 | 35.0 | 640.0 | 7.90 | 25 | |
| 27 | 20.0 | 100.0 | 8.45 | 30 | |
| 18 | 6.0 | 64.0 | 8.35 | 35 | |
| 39 | 50.0 | 400.0 | 8.32 | 40 | |

8" GRAVEL BASE

DARK BROWN CLAY WITH SAND (CL)
medium stiff, moist, fine-grained sand with trace of
gravelBROWN SILT (ML)
stiff, moist, with trace of fine-grained sand and
minor rootlets, micaceousBROWN SILTY SAND (SM)
medium dense, fine grained with trace of medium
grained, mottled

increasing silt content

GRAY-BROWN SAND (SP)
dense, moist, fine to coarse grained with trace of
subrounded gravel, micaceousBROWN SILTY SAND (SM)
dense, fine grained, mottled, micaceousincreasing silt content
BROWN SILT WITH SAND (ML)
very stiff, moist, fine-grained sand

decreasing sand content

RED-BROWN CLAY (CL)
hard, moist, with trace of fine-grained sand

MCK0002675

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Engineering and Environmental Services

Log of Boring MK-SB-36 (sheet 1 of 2)

PLATE

McKesson Corporation Property
Santa Fe Springs, California

B40

DRAWN

HK

JOB NUMBER

17333, 168.11

APPROVED

THK

DATE

1/92

REVISED

DATE

3/D:

Top of Casing 147.26 ftEquipment 10" HSAElevation 147.6 ft Date 1/23/91

Blows/ft

PID

OVA

Soil pH

Depth ft
SampleFilter Sand
(Monterey No. 3)4" dia. Slotted PVC
Casing (0.020" Slots)

Bottom Cap

48 20.0 100.0 8.58 *

45

BROWN SILT WITH SAND (ML)
very dense, moist, fine-grained sand, micaceous,
mottled
water level measured on 4/11/91

33 30.0 98.0 9.43

50

BROWN SAND (SP)
dense, saturated, fine grained with trace of coarse
grained and fine-grained gravel

33 18.0 60.0 9.22

55

color change to gray-brown, fine to medium
grained

44 20.0 64.0 9.10

60

color change to brown, micaceous with some silt

39 3.0 12.0 9.08

65

Boring terminated at 65 feet.
Groundwater encountered at approximately 48.5 feet
during drilling.
Boring converted to ground-water monitoring well
on 1/23/91.

70

75

80

MCK0002676

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Engineering and Environmental Services

Log of Boring MK-SB-36 (sheet 2 of 2)

PLATE

McKesson Corporation Property
Santa Fe Springs, California

B40a

DRAWN

JOB NUMBER

APPROVED

DATE

REVISED

DATE

HK

17333,168.11

JHK

1/92

3/0:

6

Top of Casing 149.30 ft

Equipment 8" & 10" HSA

Elevation 148.5 ft Date 1/24/91

(See Plate B47 for
Wellhead
Construction)

10" dia. Borehole
4" dia. Blank

PVC Casing

Bentonite-Cement
Grout

Bentonite Pellet Seal

Filter Sand
(Monterey No. 3)

4" dia. Slotted PVC
Casing (0.020" Slots)

Bottom Cap

Blows/ft

PTD

OVA

Soil pH

Depth ft
Sample

| | | | |
|-------|------|-------|--------|
| 12 | 50.0 | 130.0 | 8.23 * |
| 16 | 17.0 | 76.0 | 7.29 * |
| 30 | 35.0 | 540.0 | 7.51 * |
| 30 | 32.0 | 220.0 | 8.37 * |
| 30 | 45.0 | 920.0 | 7.92 * |
| 50/6" | 11.0 | 180.0 | 8.41 * |
| 25 | 19.0 | 380.0 | 8.01 |

6" GRAVEL BASE

BROWN SILTY SAND (SM)
medium dense, moist, fine grained, micaceous

DARK BROWN SANDY CLAY (CL)
very stiff, moist, fine-grained sand with trace of
coarse-grained sand

RED-BROWN SILTY SAND (SM)
dense, moist, fine grained with trace of medium
grained and gravel

RED-BROWN SAND (SP)
dense, moist, fine to medium grained with some silt
and trace of gravel

decreasing silt content, fine-grained sand

dry on 4/11/91

BROWN SILT (ML)
very stiff, wet to saturated, with trace of very
fine-grained sand, micaceous

Boring terminated at 31.5 feet.
Groundwater encountered at 27 feet during drilling.
Boring converted to ground water monitoring well
on 1/24/91.

MCK0002677



Harding Lawson Associates
Engineering and Environmental Services

Log of Boring MK-SB-37 (sheet 1 of 1)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B41

| | | | | | |
|-------|---------------|----------|------|---------|------|
| DRAWN | JOB NUMBER | APPROVED | DATE | REVISED | DATE |
| HK | 17333, 168.11 | TAK | 1/92 | | |

3/D:

| Liquid Limit | Plasticity Index | Moisture Cont. (%) | Dry Dens. (pcf) | Blows/ft | PTD | OVA | Soil pH | Depth ft | Sample | Equipment | Elevation | Date |
|--------------|------------------|--------------------|-----------------|----------|------|-------|---------|----------|---|-----------|-----------|---------|
| | | | | | | | | | | 8" HSA | 149.0 ft | 1/24/91 |
| | | | | 8 | 0.0 | 1.0 | 7.28 | 0 | | | | |
| | | | | | | | | | 4" ASPHALTIC CONCRETE | | | |
| | | | | | | | | | GRAY-BROWN SILTY SAND (SM) | | | |
| | | | | | | | | | loose, moist, fine grained with trace of coarse grained, mottled | | | |
| | | | | 8 | 9.0 | 39.0 | 6.88 * | 5 | | | | |
| | | | | | | | | | increasing silt content | | | |
| | | | | 16 | 14.0 | 56.0 | 6.97 | 10 | | | | |
| | | | | | | | | | color change to red-brown, medium dense | | | |
| | | | | | | | | | increasing coarse-grained sand content, trace of gravel | | | |
| | | | | 23 | 92.0 | 480.0 | 7.50 * | 15 | | | | |
| | | | | | | | | | YELLOW-BROWN SAND (SP) | | | |
| | | | | | | | | | medium dense, moist, fine to medium grained with trace of coarse grained and minor silt, trace of gravel, mottled | | | |
| | | | | 40 | 60.0 | 340.0 | 7.68 * | 20 | | | | |
| | | | | | | | | | color change to red-brown, dense, fine-grained sand | | | |
| | | | | 41 | 60.0 | 340.0 | 7.31 * | 25 | | | | |
| | | | | | | | | | very dense, fine to medium grained | | | |
| | | | | | | | | | BROWN SILT (ML) | | | |
| | | | | | | | | | very stiff, moist, with some fine-grained sand, mottled, micaceous | | | |
| | | | | 16 | 30.0 | 300.0 | 6.99 * | 30 | | | | |
| | | | | | | | | | | | | |
| | | | | 24 | 16.0 | 54.0 | 6.84 * | 35 | | | | |
| | | | | | | | | | RED-BROWN CLAY (CL) | | | |
| | | | | | | | | | very stiff, moist, with some fine-grained sand, mottled | | | |
| | | | | | | | | | RED-BROWN SILTY SAND (SM) | | | |
| | | | | | | | | | medium dense, moist, fine grained, mottled | | | |
| | | | | | | | | 40 | | | | |

MCK0002678



Harding Lawson Associates
Engineering and Environmental Services

Log of Boring MK-SB-38 (sheet 1 of 2)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B42

| | | | | | |
|-------|----------------|----------|------|---------|------|
| DRAWN | JOB NUMBER | APPROVED | DATE | REVISED | DATE |
| HK | 17333, 168, 11 | THK | 1/92 | | |

0 3/4 D:

| Liquid Limit | Plasticity Index | Moisture Cont. (%) | Dry Dens. (pcf) | Blows/ft | PID | OVA | Soil pH | Depth ft | Sample |
|--------------|------------------|--------------------|-----------------|----------|------|-------|---------|----------|--------|
| | | | | 28 | 13.0 | 20.0 | 6.71 * | 40 | |
| | | | | 41 | 50.0 | 100.0 | 7.71 * | 45 | |
| | | | | 44 | 45.0 | 240.0 | 7.39 | 50 | |
| | | | | | | | | 55 | |
| | | | | | | | | 60 | |
| | | | | | | | | 65 | |
| | | | | | | | | 70 | |
| | | | | | | | | 75 | |
| | | | | | | | | 80 | |

Equipment 8" HSA
 Elevation 149.0 ft Date 1/24/91

decreasing silt content, dense

color change to brown
BROWN SAND (SP)
 dense, saturated, fine grained, micaceous

Boring terminated at 50 feet.
 Groundwater encountered at 49.5 feet during drilling.

Boring backfilled with bentonite-cement grout on 1/24/91.

MCK0002679



Harding Lawson Associates
 Engineering and Environmental Services

Log of Boring MK-SB-38 (sheet 2 of 2)

PLATE

McKesson Corporation Property
 Santa Fe Springs, California

B42a

| | | | | | |
|-------|---------------|----------|------|---------|------|
| DRAWN | JOB NUMBER | APPROVED | DATE | REVISED | DATE |
| HK | 17333, 168.11 | THK | 1/92 | | |

0. 3/D:

| Liquid Limit | Plasticity Index | Moisture Cont. (%) | Dry Dens. (pcf) | Blows/ft | PID | OVA | Soil pH | Depth ft | Sample | Equipment | Elevation | Date |
|--------------|------------------|--------------------|-----------------|----------|-----|-----|---------|----------|--|-----------|-----------|---------|
| | | | | | | | | 0 | 6" GRAVEL BASE
SAND AND GRAVEL SUBBASE | 8" HSA | 148.5 ft | 1/25/91 |
| | | | | 15 | 0.6 | 0.0 | 8.18 | | BROWN SILTY SAND (SM)
medium dense, moist, fine grained with some coarse grained and trace of gravel | | | |
| | | | | 12 | 2.2 | 0.0 | 8.13 * | 5 | BROWN SILT (ML)
stiff, moist, with some fine-grained sand, micaceous | | | |
| | | | | 12 | 0.8 | 0.0 | 8.02 * | 10 | BROWN SILTY SAND (SM)
medium dense, moist, fine grained with trace of medium grained, oxidized and mottled | | | |
| | | | | | | | | | Boring terminated at 10.5 feet.
Groundwater not encountered during drilling.
Boring backfilled with bentonite-cement grout on 1/25/91. | | | |
| | | | | | | | | 15 | | | | |
| | | | | | | | | 20 | | | | |
| | | | | | | | | 25 | | | | |
| | | | | | | | | 30 | | | | |
| | | | | | | | | 35 | | | | |
| | | | | | | | | 40 | | | | |

MCK0002680



Harding Lawson Associates
Engineering and Environmental Services

Log of Boring MK-SB-39 (sheet 1 of 1)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B43

| | | | | | |
|-------|---------------|----------|------|---------|------|
| DRAWN | JOB NUMBER | APPROVED | DATE | REVISED | DATE |
| HK | 17333, 168.11 | THK | 1/92 | | |

3/D:

Liquid Limit

Plasticity Index

Moisture Cont. (%)

Dry Dens. (pcf)

Blows/ft

PID

OVA

Soil pH

Depth ft
Sample

Equipment

8" HSA

Elevation

148.2 ft

Date

1/25/91

23

1.5

0.0

17

17.0

25.0

27

17.0

25.0

*

5

*

10

6" GRAVEL BASE

SAND AND GRAVEL SUBBASE

RED-BROWN SILTY SAND (SM)

medium dense, moist, fine grained with trace of medium grained

GRAY SILT (ML)

very stiff, moist, with trace of fine-grained sand, micaceous, mottled

RED-BROWN SILTY SAND (SM)

medium dense, moist, fine grained with trace of medium grained, oxidized and mottled with trace of gravel

Boring terminated at 10.5 feet.

Groundwater not encountered during drilling.

Boring backfilled with bentonite-cement grout on 1/25/91.

15

20

25

30

35

40

MCK0002681



Harding Lawson Associates
Engineering and Environmental Services

Log of Boring MK-SB-40 (sheet 1 of 1)

McKesson Corporation Property
Santa Fe Springs, California

PLATE

B44

DRAWN

JOB NUMBER

APPROVED

DATE

REVISED

DATE

HK

17333, 168.11

THK

1/92

2 3/0:

| Liquid Limit | Plasticity Index | Moisture Cont. (%) | Dry Dens. (pcf) | Blows/ft | PID | OVA | Soil pH | Depth ft | Sample | Equipment | Elevation | Date |
|--------------|------------------|--------------------|-----------------|----------|-----|-----|---------|----------|---|-----------|-----------|---------|
| | | | | | | | | | | 8" HSA | 147.9 ft | 1/25/91 |
| | | | | | | | | 0 | 4" ASPHALTIC CONCRETE | | | |
| | | | | 15 | 1.0 | 0.0 | | | GRAY SANDY SILT (ML) | | | |
| | | | | | | | | | stiff, moist, with fine-grained sand, micaceous, mottled | | | |
| | | | | 16 | 7.0 | 0.4 | * | 5 | decreasing sand content | | | |
| | | | | | | | | | color change to gray-brown, trace of gravel | | | |
| | | | | 13 | 9.0 | 1.6 | * | 10 | RED-BROWN SILTY SAND (SM) | | | |
| | | | | | | | | | medium dense, moist, fine grained with trace of medium grained and gravel | | | |
| | | | | | | | | | Boring terminated at 10.5 feet. | | | |
| | | | | | | | | | Groundwater not encountered during drilling. | | | |
| | | | | | | | | | Boring backfilled with bentonite-cement grout on 1/25/91. | | | |
| | | | | | | | | 15 | | | | |
| | | | | | | | | 20 | | | | |
| | | | | | | | | 25 | | | | |
| | | | | | | | | 30 | | | | |
| | | | | | | | | 35 | | | | |
| | | | | | | | | 40 | | | | |

MCK0002682



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Engineering and Environmental Services

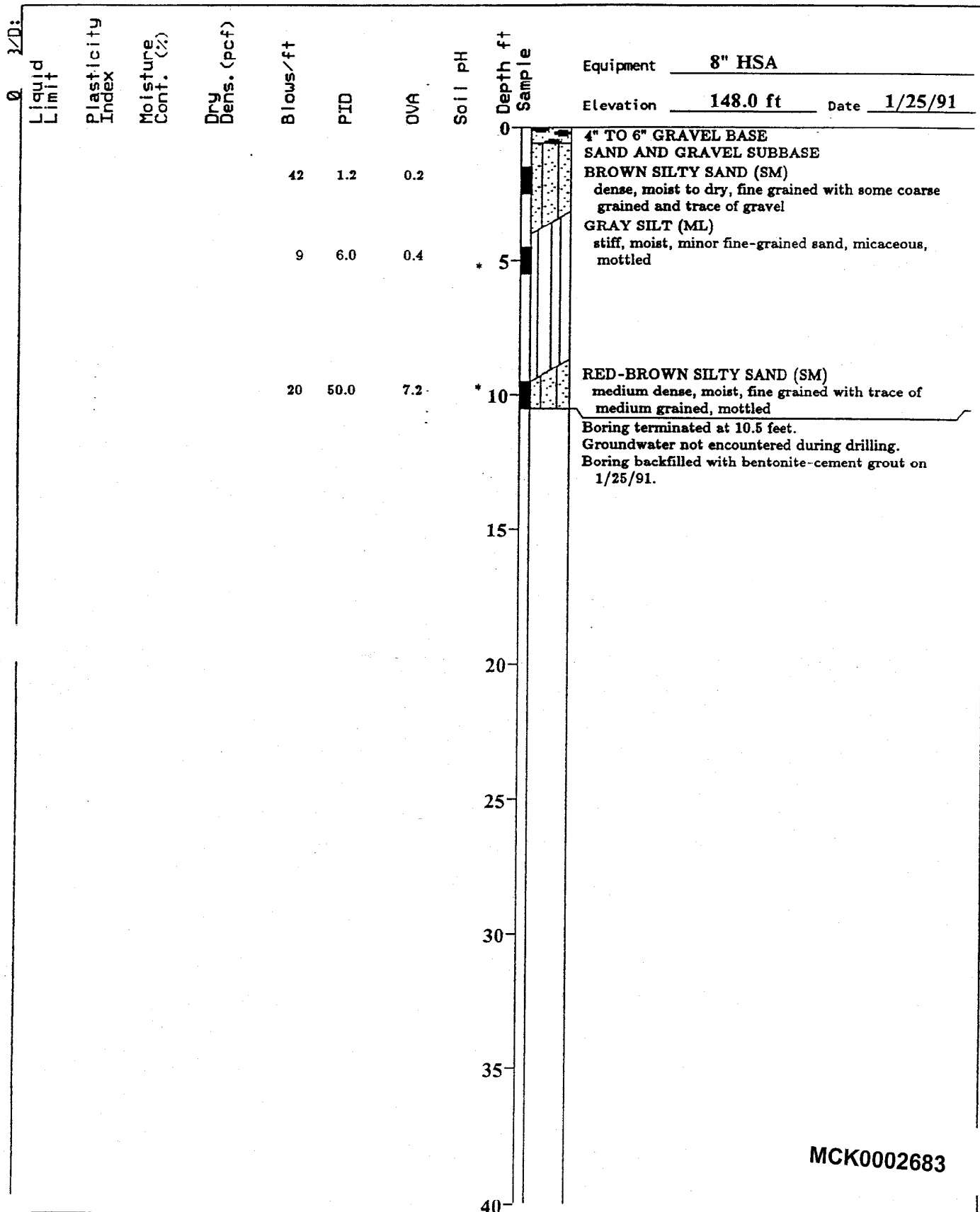
Log of Boring MK-SB-41 (sheet 1 of 1)

PLATE

McKesson Corporation Property
Santa Fe Springs, California

B45

| | | | | | |
|-------|---------------|----------|------|---------|------|
| DRAWN | JOB NUMBER | APPROVED | DATE | REVISED | DATE |
| HK | 17333, 168.11 | TAK | 1/92 | | |

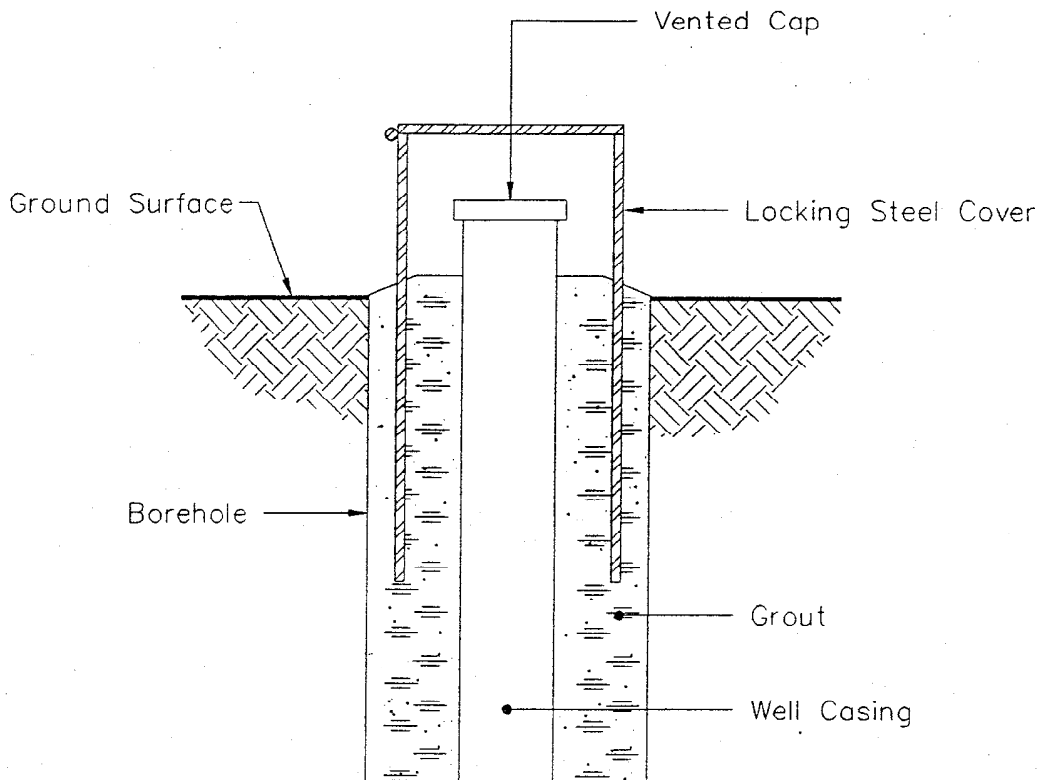


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Engineering and Environmental Services

Log of Boring MK-SB-42 (sheet 1 of 1)
McKesson Corporation Property
Santa Fe Springs, California

PLATE

B46



WELLHEAD DETAIL

| | | | |
|--|------------------------|--|-----------------|
| | Bentonite-Cement Grout | | Bentonite Grout |
| | Blank PVC Casing | | |
| | Bentonite Seal | | |
| | Filter Sand | | |
| | Slotted PVC Casing | | |
| | Slough | | |

MCK0002684

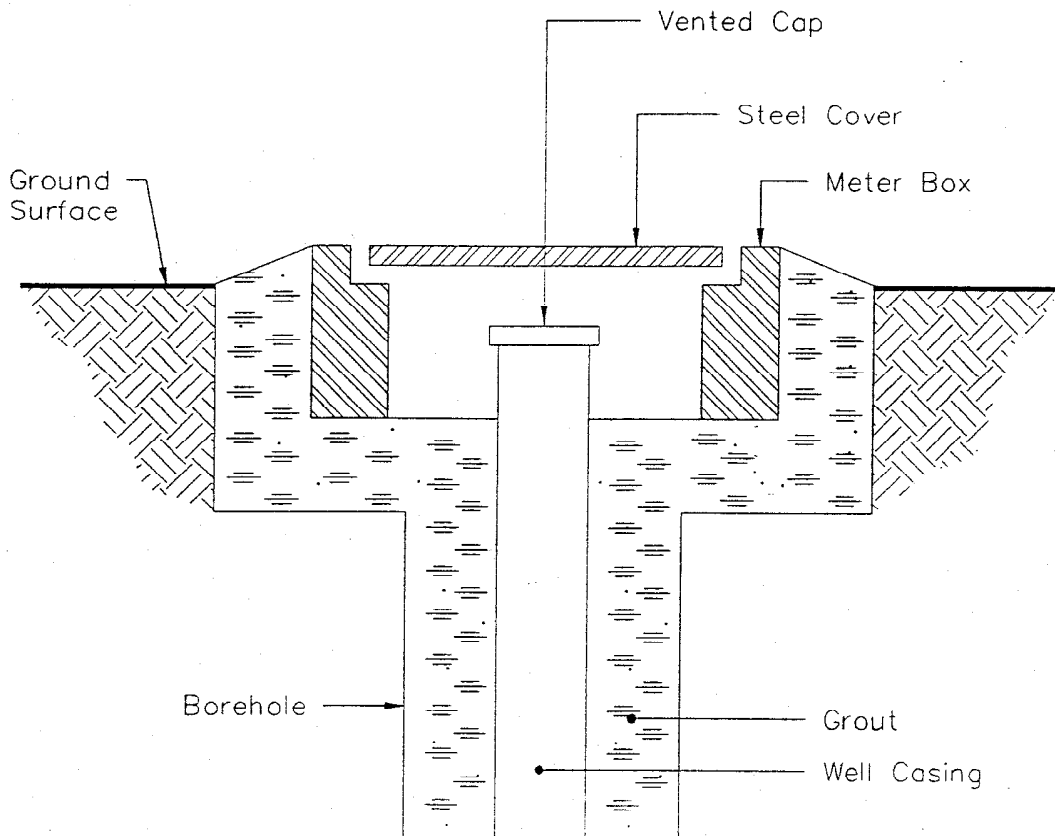
KEY TO WELL DETAIL (ON LOGS OF BORINGS)



Harding Lawson Associates
Engineering and
Environmental Services

WELLHEAD DETAIL - ABOVEGROUND COMPLETION
McKesson Corporation Property
Santa Fe Springs, California

B47



WELLHEAD DETAIL

| | | | |
|--|------------------------|--|-----------------|
| | Bentonite-Cement Grout | | Bentonite Grout |
| | Blank PVC Casing | | |
| | Bentonite Seal | | |
| | Filter Sand | | |
| | Slotted PVC Casing | | |
| | Slough | | |

MCK0002685

KEY TO WELL DETAIL (ON LOGS OF BORINGS)



Harding Lawson Associates
Engineering and
Environmental Services

WELLHEAD DETAIL - BELOWGROUND COMPLETION
McKesson Corporation /Property
Santa Fe Springs, California

PLATE

B48

DRAWN
HK

JOB NUMBER
17333,168.11

APPROVED
THL

DATE
1/92

REVISED

DATE

MCK0002686

APPENDIX C
CPT DATA

MCK0002687

 *
 *
 *
 * SOUNDING : CPT-1 PROJECT NO : 9110-09504
 * PROJECT : HLA/MCKESSON INSTRUMENT : F15CKE091
 * LOCATION : SANTA FE SPRINGS SYSTEM : T-2
 * DATE : 04-09-1991 OPERATOR : EC/DH/MR
 *

PAGE 1 of 3

| DEPTH | TIP RESISTANCE | NORMALIZED | FRICTION | CONE PORE | SOIL BEHAVIOR TYPE |
|-------|----------------|----------------|----------|-----------|----------------------------|
| (ft) | (tsf) | TIP RESISTANCE | RATIO | PRESSURE | |
| | | (tsf) | (%) | (tsf) | |
| .0 | .0 | .0 | .00 | NA | |
| .5 | .0 | .0 | .00 | NA | |
| 1.0 | .0 | .0 | .00 | NA | |
| 1.5 | .0 | .0 | .00 | NA | |
| 2.0 | 164.3 | 321.9 | 1.86 | NA | *SAND to SILTY SAND |
| 2.5 | 86.9 | 161.7 | 1.77 | NA | SAND to SILTY SAND |
| 3.0 | 49.6 | 88.5 | 1.16 | NA | SAND to SILTY SAND |
| 3.5 | 28.3 | 48.5 | 2.01 | NA | SILTY SAND to SANDY SILT |
| 4.0 | 27.8 | 46.2 | 1.13 | NA | SILTY SAND to SANDY SILT |
| 4.5 | 20.4 | 32.8 | 1.32 | NA | SILTY SAND to SANDY SILT |
| 5.0 | 20.3 | 31.6 | 2.09 | NA | SILTY SAND to SANDY SILT |
| 5.5 | 21.5 | 32.6 | 3.19 | NA | SANDY SILT to CLAYEY SILT |
| 6.0 | 20.5 | 30.3 | 3.98 | NA | CLAYEY SILT to SILTY CLAY |
| 6.5 | 17.6 | 25.5 | 4.30 | NA | CLAYEY SILT to SILTY CLAY |
| 7.0 | 15.4 | 21.7 | 4.58 | NA | CLAYEY SILT to SILTY CLAY |
| 7.5 | 16.2 | 22.4 | 4.58 | NA | CLAYEY SILT to SILTY CLAY |
| 8.0 | 19.1 | 26.0 | 3.96 | NA | CLAYEY SILT to SILTY CLAY |
| 8.5 | 29.5 | 39.3 | 3.85 | NA | SANDY SILT to CLAYEY SILT |
| 9.0 | 53.4 | 69.6 | 4.16 | NA | *CLAYEY SAND to SANDY CLAY |
| 9.5 | 75.6 | 96.9 | 5.45 | NA | *SANDY CLAY to SILTY CLAY |
| 10.0 | 63.9 | 80.5 | 6.46 | NA | *SANDY CLAY to SILTY CLAY |
| 10.5 | 84.4 | 104.6 | 6.85 | NA | *SANDY CLAY to SILTY CLAY |
| 11.0 | 103.0 | 125.5 | 7.25 | NA | *SANDY CLAY to SILTY CLAY |
| 11.5 | 132.8 | 159.2 | 5.89 | NA | *SANDY CLAY to SILTY CLAY |
| 12.0 | 151.1 | 178.4 | 4.70 | NA | *CLAYEY SAND to SANDY CLAY |
| 12.5 | 138.6 | 161.2 | 4.63 | NA | *CLAYEY SAND to SANDY CLAY |
| 13.0 | 121.5 | 139.2 | 3.30 | NA | *CLAYEY SAND to SANDY CLAY |
| 13.5 | 161.1 | 182.0 | 1.68 | NA | SAND to SILTY SAND |
| 14.0 | 204.2 | 227.3 | 1.38 | NA | SAND to SILTY SAND |
| 14.5 | 248.1 | 272.4 | 1.24 | NA | SAND to SILTY SAND |
| 15.0 | 263.9 | 285.9 | 1.05 | NA | SAND to SILTY SAND |
| 15.5 | 270.6 | 289.3 | 1.11 | NA | SAND to SILTY SAND |
| 16.0 | 264.9 | 279.6 | .99 | NA | SAND to SILTY SAND |
| 16.5 | 256.2 | 267.0 | 1.00 | NA | SAND to SILTY SAND |
| 17.0 | 238.4 | 245.3 | .84 | NA | SAND to SILTY SAND |
| 17.5 | 239.8 | 243.8 | .78 | NA | SAND to SILTY SAND |
| 18.0 | 251.3 | 252.4 | .77 | NA | SAND to SILTY SAND |
| 18.5 | 245.5 | 243.6 | .84 | NA | SAND to SILTY SAND |
| 19.0 | 262.5 | 257.5 | .76 | NA | SAND to SILTY SAND |
| 19.5 | 294.9 | 285.9 | .94 | NA | SAND to SILTY SAND |
| 20.0 | 307.3 | 294.6 | .63 | NA | SANDY GRAVEL to SAND |

NA = NOT APPLICABLE
 TOP 1.5 FT IS DISTURBED SOIL
 *INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
 ASSUMED TOTAL UNIT WT = 110 PCF
 ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002688

The Earth Technology
 Corporation

SOUNDING : CPT-1

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| 20.5 | 325.1 | 308.1 | .68 | NA | SANDY GRAVEL to SAND |
| 21.0 | 328.9 | 308.3 | .74 | NA | SANDY GRAVEL to SAND |
| 21.5 | 272.7 | 252.8 | .65 | NA | SANDY GRAVEL to SAND |
| 22.0 | 98.3 | 90.1 | 2.02 | NA | SILTY SAND to SANDY SILT |
| 22.5 | 150.0 | 136.1 | 1.62 | NA | SAND to SILTY SAND |
| 23.0 | 84.5 | 75.9 | 3.34 | NA | SANDY SILT to CLAYEY SILT |
| 23.5 | 88.8 | 78.9 | 2.69 | NA | SILTY SAND to SANDY SILT |
| 24.0 | 92.2 | 81.1 | 3.66 | NA | *CLAYEY SAND to SANDY CLAY |
| 24.5 | 96.4 | 83.9 | 5.16 | NA | *SANDY CLAY to SILTY CLAY |
| 25.0 | 81.8 | 70.5 | 4.95 | NA | *SANDY CLAY to SILTY CLAY |
| 25.5 | 94.3 | 80.4 | 3.94 | NA | *CLAYEY SAND to SANDY CLAY |
| 26.0 | 81.8 | 69.1 | 6.01 | NA | *SANDY CLAY to SILTY CLAY |
| 26.5 | 79.9 | 66.8 | 5.56 | NA | *SANDY CLAY to SILTY CLAY |
| 27.0 | 87.2 | 72.2 | 5.10 | NA | *SANDY CLAY to SILTY CLAY |
| 27.5 | 92.7 | 76.0 | 5.62 | NA | *SANDY CLAY to SILTY CLAY |
| 28.0 | 79.8 | 64.8 | 5.40 | NA | *SANDY CLAY to SILTY CLAY |
| 28.5 | 45.7 | 36.8 | 6.55 | NA | *SANDY CLAY to SILTY CLAY |
| 29.0 | 35.0 | 27.9 | 4.90 | NA | CLAYEY SILT to SILTY CLAY |
| 29.5 | 21.6 | 17.1 | 4.78 | NA | CLAYEY SILT to SILTY CLAY |
| 30.0 | 25.5 | 19.9 | 3.71 | NA | CLAYEY SILT to SILTY CLAY |
| 30.5 | 32.3 | 25.1 | 4.37 | NA | CLAYEY SILT to SILTY CLAY |
| 31.0 | 45.9 | 35.3 | 4.52 | NA | CLAYEY SILT to SILTY CLAY |
| 31.5 | 79.6 | 60.8 | 4.65 | NA | *SANDY CLAY to SILTY CLAY |
| 32.0 | 149.0 | 112.1 | 4.10 | NA | *CLAYEY SAND to SANDY CLAY |
| 32.5 | 202.4 | 151.1 | 3.13 | NA | *SILTY SAND to CLAYEY SAND |
| 33.0 | 130.2 | 96.5 | 5.79 | NA | *SANDY CLAY to SILTY CLAY |
| 33.5 | 92.2 | 67.7 | 5.83 | NA | *SANDY CLAY to SILTY CLAY |
| 34.0 | 86.7 | 63.2 | 5.27 | NA | *SANDY CLAY to SILTY CLAY |
| 34.5 | 96.1 | 69.1 | 6.38 | NA | *SANDY CLAY to SILTY CLAY |
| 35.0 | 74.8 | 53.6 | 5.67 | NA | *SANDY CLAY to SILTY CLAY |
| 35.5 | 98.5 | 69.9 | 4.07 | NA | *CLAYEY SAND to SANDY CLAY |
| 36.0 | 73.2 | 51.5 | 6.58 | NA | *SANDY CLAY to SILTY CLAY |
| 36.5 | 63.2 | 44.1 | 4.57 | NA | *SANDY CLAY to SILTY CLAY |
| 37.0 | 62.8 | 43.1 | 6.04 | NA | *SANDY CLAY to SILTY CLAY |
| 37.5 | 56.5 | 38.8 | 6.36 | NA | *SANDY CLAY to SILTY CLAY |
| 38.0 | 46.4 | 31.5 | 5.61 | NA | *SANDY CLAY to SILTY CLAY |
| 38.5 | 44.0 | 29.1 | 5.27 | NA | *SANDY CLAY to SILTY CLAY |
| 39.0 | 44.7 | 29.9 | 7.10 | NA | *SANDY CLAY to SILTY CLAY |
| 39.5 | 37.9 | 25.1 | 6.20 | NA | *SANDY CLAY to SILTY CLAY |
| 40.0 | 33.3 | 21.9 | 4.50 | NA | CLAYEY SILT to SILTY CLAY |
| 40.5 | 33.0 | 21.5 | 3.35 | NA | SANDY SILT to CLAYEY SILT |
| 41.0 | 33.6 | 21.8 | 3.92 | NA | CLAYEY SILT to SILTY CLAY |
| 41.5 | 32.2 | 20.6 | 3.67 | NA | CLAYEY SILT to SILTY CLAY |
| 42.0 | 34.9 | 22.2 | 3.99 | NA | CLAYEY SILT to SILTY CLAY |
| 42.5 | 40.0 | 25.3 | 3.68 | NA | CLAYEY SILT to SILTY CLAY |
| 43.0 | 35.5 | 22.2 | 4.76 | NA | CLAYEY SILT to SILTY CLAY |
| 43.5 | 32.4 | 20.1 | 4.94 | NA | CLAYEY SILT to SILTY CLAY |
| 44.0 | 33.5 | 20.7 | 4.38 | NA | CLAYEY SILT to SILTY CLAY |
| 44.5 | 42.6 | 26.0 | 4.59 | NA | CLAYEY SILT to SILTY CLAY |
| 45.0 | 169.0 | 102.5 | 2.88 | NA | SILTY SAND to SANDY SILT |

NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002689

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|--------------------------|
| 45.5 | 203.8 | 122.6 | 1.76 | NA | SILTY SAND to SANDY SILT |
| 46.0 | 212.8 | 127.0 | 1.91 | NA | SILTY SAND to SANDY SILT |
| 46.5 | 193.6 | 114.7 | 2.04 | NA | SILTY SAND to SANDY SILT |
| 47.0 | 199.4 | 117.1 | 2.66 | NA | SILTY SAND to SANDY SILT |
| 47.5 | 247.9 | 144.5 | 2.20 | NA | SILTY SAND to SANDY SILT |
| 48.0 | 269.5 | 155.9 | 1.77 | NA | SAND to SILTY SAND |
| 48.5 | 349.8 | 201.6 | 1.29 | NA | SAND to SILTY SAND |
| 49.0 | 320.6 | 184.2 | 1.29 | NA | SAND to SILTY SAND |
| 49.5 | 367.5 | 210.4 | 1.36 | NA | SAND to SILTY SAND |
| 50.0 | 372.2 | 212.4 | 1.30 | NA | SAND to SILTY SAND |
| 50.5 | 338.4 | 192.4 | 1.21 | NA | SAND to SILTY SAND |
| 51.0 | 322.4 | 182.7 | 1.08 | NA | SAND to SILTY SAND |
| 51.5 | 341.6 | 192.9 | .87 | NA | SAND to SILTY SAND |
| 52.0 | 300.8 | 169.4 | 1.28 | NA | SAND to SILTY SAND |
| 52.5 | 296.9 | 166.6 | 1.92 | NA | SILTY SAND to SANDY SILT |
| 53.0 | 290.5 | 162.4 | 1.63 | NA | SAND to SILTY SAND |
| 53.5 | 324.1 | 180.7 | 1.78 | NA | SAND to SILTY SAND |
| 54.0 | 329.2 | 182.9 | 1.59 | NA | SAND to SILTY SAND |
| 54.5 | 308.4 | 170.7 | 1.47 | NA | SAND to SILTY SAND |
| 55.0 | 298.4 | 164.7 | 1.37 | NA | SAND to SILTY SAND |
| 55.5 | 311.2 | 171.1 | 1.25 | NA | SAND to SILTY SAND |
| 56.0 | 325.2 | 178.3 | .77 | NA | SAND to SILTY SAND |
| 56.5 | 304.1 | 166.1 | .93 | NA | SAND to SILTY SAND |
| 57.0 | 411.5 | 224.1 | .42 | NA | SANDY GRAVEL to SAND |
| 57.5 | 412.9 | 224.1 | .46 | NA | SANDY GRAVEL to SAND |
| 58.0 | 306.4 | 165.7 | .54 | NA | SAND to SILTY SAND |
| 58.5 | 358.2 | 193.1 | 1.40 | NA | SAND to SILTY SAND |
| 59.0 | 441.6 | 237.3 | .59 | NA | SANDY GRAVEL to SAND |
| 59.5 | 459.6 | 246.1 | .47 | NA | SANDY GRAVEL to SAND |

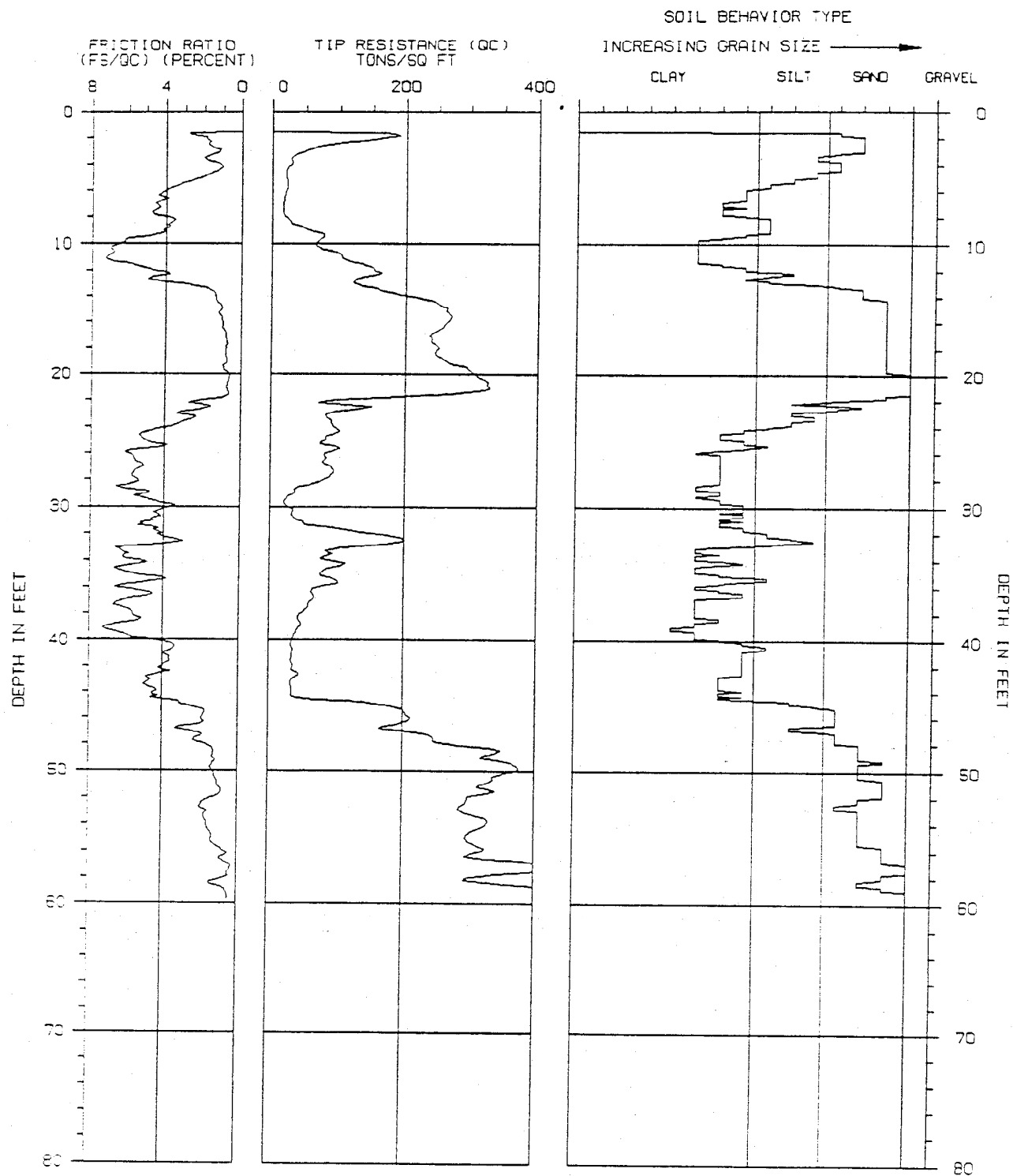
NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002690



TOP 1.5 FT IS DISTURBED SOIL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

CONE PENETRATION TEST


SOUNDING NUMBER: CPT-1

PROJECT NAME : HLA/MCKESSON

LOCATION : SANTA FE SPRINGS

PROJECT NUMBER : 9110-09504

DATE : 04-09-1991

 THE EARTH TECHNOLOGY CORPORATION

MCK0002691

CONE PENETRATION TEST

SOUNDING : CPT-2
PROJECT : HLA/MCKESSON
LOCATION : SANTA FE SPRINGS
DATE : 04-09-1991

PROJECT NO : 9110-09504
INSTRUMENT : F15CKE091
SYSTEM : T-2
OPERATOR : EC/DH/MR

PAGE 1 of 3

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| .0 | .0 | .0 | .00 | NA | |
| .5 | 1.2 | 3.2 | 15.00 | NA | ORGANIC MATERIAL |
| 1.0 | 37.8 | 85.4 | 2.22 | NA | SILTY SAND to SANDY SILT |
| 1.5 | 57.8 | 120.3 | 2.46 | NA | SILTY SAND to SANDY SILT |
| 2.0 | 44.3 | 86.7 | 3.75 | NA | *CLAYEY SAND to SANDY CLAY |
| 2.5 | 32.3 | 60.2 | 3.54 | NA | SANDY SILT to CLAYEY SILT |
| 3.0 | 25.9 | 46.2 | 4.67 | NA | *SANDY CLAY to SILTY CLAY |
| 3.5 | 18.2 | 31.2 | 3.98 | NA | CLAYEY SILT to SILTY CLAY |
| 4.0 | 12.0 | 19.8 | 5.50 | NA | SILTY CLAY to CLAY |
| 4.5 | 15.2 | 24.4 | 5.38 | NA | CLAYEY SILT to SILTY CLAY |
| 5.0 | 15.9 | 24.9 | 5.07 | NA | CLAYEY SILT to SILTY CLAY |
| 5.5 | 12.0 | 18.2 | 5.17 | NA | CLAYEY SILT to SILTY CLAY |
| 6.0 | 15.0 | 22.3 | 6.01 | NA | SILTY CLAY to CLAY |
| 6.5 | 14.3 | 20.7 | 6.10 | NA | SILTY CLAY to CLAY |
| 7.0 | 11.3 | 16.0 | 6.49 | NA | SILTY CLAY to CLAY |
| 7.5 | 10.6 | 14.6 | 5.79 | NA | SILTY CLAY to CLAY |
| 8.0 | 18.3 | 24.8 | 4.69 | NA | CLAYEY SILT to SILTY CLAY |
| 8.5 | 29.8 | 39.6 | 2.48 | NA | SANDY SILT to CLAYEY SILT |
| 9.0 | 36.9 | 48.2 | 1.57 | NA | SILTY SAND to SANDY SILT |
| 9.5 | 34.0 | 43.6 | 1.06 | NA | SILTY SAND to SANDY SILT |
| 10.0 | 14.9 | 18.7 | 1.09 | NA | SILTY SAND to SANDY SILT |
| 10.5 | 28.0 | 34.7 | 1.69 | NA | SILTY SAND to SANDY SILT |
| 11.0 | 43.1 | 52.5 | 2.49 | NA | SILTY SAND to SANDY SILT |
| 11.5 | 48.6 | 58.2 | 1.55 | NA | SILTY SAND to SANDY SILT |
| 12.0 | 41.0 | 48.4 | 2.49 | NA | SANDY SILT to CLAYEY SILT |
| 12.5 | 55.6 | 64.7 | 2.02 | NA | SILTY SAND to SANDY SILT |
| 13.0 | 72.4 | 82.9 | 1.07 | NA | SAND to SILTY SAND |
| 13.5 | 105.2 | 118.8 | 1.47 | NA | SAND to SILTY SAND |
| 14.0 | 149.8 | 166.8 | 1.09 | NA | SAND to SILTY SAND |
| 14.5 | 173.8 | 190.9 | .87 | NA | SAND to SILTY SAND |
| 15.0 | 179.0 | 193.9 | 1.05 | NA | SAND to SILTY SAND |
| 15.5 | 171.6 | 183.5 | .99 | NA | SAND to SILTY SAND |
| 16.0 | 169.5 | 179.0 | .97 | NA | SAND to SILTY SAND |
| 16.5 | 148.7 | 154.9 | .76 | NA | SAND to SILTY SAND |
| 17.0 | 129.8 | 133.5 | .69 | NA | SAND to SILTY SAND |
| 17.5 | 170.0 | 172.9 | .75 | NA | SAND to SILTY SAND |
| 18.0 | 176.4 | 177.2 | .88 | NA | SAND to SILTY SAND |
| 18.5 | 188.1 | 186.7 | .88 | NA | SAND to SILTY SAND |
| 19.0 | 173.3 | 170.0 | .75 | NA | SAND to SILTY SAND |
| 19.5 | 139.4 | 135.2 | .98 | NA | SAND to SILTY SAND |
| 20.0 | 128.5 | 123.2 | .89 | NA | SAND to SILTY SAND |

NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002692

The Earth Technology
Corporation

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| 20.5 | 126.4 | 119.8 | .78 | NA | SAND to SILTY SAND |
| 21.0 | 132.1 | 123.8 | .92 | NA | SAND to SILTY SAND |
| 21.5 | 149.8 | 138.9 | .85 | NA | SAND to SILTY SAND |
| 22.0 | 164.5 | 150.9 | .85 | NA | SAND to SILTY SAND |
| 22.5 | 156.4 | 141.9 | .87 | NA | SAND to SILTY SAND |
| 23.0 | 165.3 | 148.4 | .92 | NA | SAND to SILTY SAND |
| 23.5 | 181.4 | 161.2 | .75 | NA | SAND to SILTY SAND |
| 24.0 | 193.9 | 170.5 | .78 | NA | SAND to SILTY SAND |
| 24.5 | 194.2 | 169.1 | .99 | NA | SAND to SILTY SAND |
| 25.0 | 263.7 | 227.2 | .85 | NA | SAND to SILTY SAND |
| 25.5 | 486.9 | 415.4 | .57 | NA | SANDY GRAVEL to SAND |
| 26.0 | 429.6 | 362.8 | .84 | NA | SANDY GRAVEL to SAND |
| 26.5 | 252.7 | 211.4 | 1.98 | NA | SAND to SILTY SAND |
| 27.0 | 114.9 | 95.2 | 4.73 | NA | *SANDY CLAY to SILTY CLAY |
| 27.5 | 98.8 | 81.1 | 4.59 | NA | *SANDY CLAY to SILTY CLAY |
| 28.0 | 61.0 | 49.6 | 4.29 | NA | *SANDY CLAY to SILTY CLAY |
| 28.5 | 61.8 | 49.8 | 3.20 | NA | SANDY SILT to CLAYEY SILT |
| 29.0 | 68.8 | 54.9 | 3.88 | NA | *CLAYEY SAND to SANDY CLAY |
| 29.5 | 34.5 | 27.3 | 3.95 | NA | CLAYEY SILT to SILTY CLAY |
| 30.0 | 26.6 | 20.8 | 2.73 | NA | SANDY SILT to CLAYEY SILT |
| 30.5 | 34.4 | 26.7 | 3.53 | NA | SANDY SILT to CLAYEY SILT |
| 31.0 | 32.2 | 24.7 | 4.08 | NA | CLAYEY SILT to SILTY CLAY |
| 31.5 | 32.5 | 24.7 | 3.56 | NA | SANDY SILT to CLAYEY SILT |
| 32.0 | 45.6 | 34.4 | 4.37 | NA | CLAYEY SILT to SILTY CLAY |
| 32.5 | 38.1 | 28.5 | 4.66 | NA | CLAYEY SILT to SILTY CLAY |
| 33.0 | 48.1 | 35.6 | 4.87 | NA | *SANDY CLAY to SILTY CLAY |
| 33.5 | 40.2 | 29.5 | 4.91 | NA | CLAYEY SILT to SILTY CLAY |
| 34.0 | 39.3 | 28.6 | 4.78 | NA | CLAYEY SILT to SILTY CLAY |
| 34.5 | 37.2 | 26.8 | 3.43 | NA | SANDY SILT to CLAYEY SILT |
| 35.0 | 48.2 | 34.5 | 4.83 | NA | *SANDY CLAY to SILTY CLAY |
| 35.5 | 49.0 | 34.8 | 4.16 | NA | CLAYEY SILT to SILTY CLAY |
| 36.0 | 66.2 | 46.5 | 4.28 | NA | *SANDY CLAY to SILTY CLAY |
| 36.5 | 75.8 | 52.9 | 5.71 | NA | *SANDY CLAY to SILTY CLAY |
| 37.0 | 64.4 | 44.5 | 6.56 | NA | *SANDY CLAY to SILTY CLAY |
| 37.5 | 52.4 | 35.9 | 6.20 | NA | *SANDY CLAY to SILTY CLAY |
| 38.0 | 43.2 | 29.4 | 6.38 | NA | *SANDY CLAY to SILTY CLAY |
| 38.5 | 40.8 | 27.5 | 6.05 | NA | *SANDY CLAY to SILTY CLAY |
| 39.0 | 35.8 | 23.9 | 6.04 | NA | *SANDY CLAY to SILTY CLAY |
| 39.5 | 31.3 | 20.8 | 5.14 | NA | CLAYEY SILT to SILTY CLAY |
| 40.0 | 37.6 | 24.7 | 4.25 | NA | CLAYEY SILT to SILTY CLAY |
| 40.5 | 40.7 | 26.6 | 5.86 | NA | *SANDY CLAY to SILTY CLAY |
| 41.0 | 34.4 | 22.2 | 5.00 | NA | CLAYEY SILT to SILTY CLAY |
| 41.5 | 31.3 | 20.1 | 4.86 | NA | CLAYEY SILT to SILTY CLAY |
| 42.0 | 30.1 | 19.1 | 4.37 | NA | CLAYEY SILT to SILTY CLAY |
| 42.5 | 33.5 | 21.1 | 4.51 | NA | CLAYEY SILT to SILTY CLAY |
| 43.0 | 36.2 | 22.7 | 5.00 | NA | CLAYEY SILT to SILTY CLAY |
| 43.5 | 39.4 | 24.5 | 4.56 | NA | CLAYEY SILT to SILTY CLAY |
| 44.0 | 40.5 | 24.9 | 5.75 | NA | *SANDY CLAY to SILTY CLAY |
| 44.5 | 47.8 | 29.2 | 5.83 | NA | *SANDY CLAY to SILTY CLAY |
| 45.0 | 57.9 | 35.1 | 5.65 | NA | *SANDY CLAY to SILTY CLAY |

NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002693

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|---------------------------|
| 45.5 | 43.0 | 25.8 | 6.16 | NA | *SANDY CLAY to SILTY CLAY |
| 46.0 | 117.2 | 70.0 | 5.62 | NA | *SANDY CLAY to SILTY CLAY |
| 46.5 | 227.3 | 134.6 | 2.52 | NA | SILTY SAND to SANDY SILT |
| 47.0 | 268.8 | 157.9 | 1.89 | NA | SILTY SAND to SANDY SILT |
| 47.5 | 269.0 | 156.8 | 1.94 | NA | SILTY SAND to SANDY SILT |
| 48.0 | 282.4 | 163.3 | 1.68 | NA | SAND to SILTY SAND |
| 48.5 | 306.1 | 176.4 | 1.18 | NA | SAND to SILTY SAND |
| 49.0 | 334.6 | 192.2 | 1.12 | NA | SAND to SILTY SAND |
| 49.5 | 329.6 | 188.7 | 1.00 | NA | SAND to SILTY SAND |
| 50.0 | 359.5 | 205.2 | .83 | NA | SAND to SILTY SAND |
| 50.5 | 334.9 | 190.5 | 1.00 | NA | SAND to SILTY SAND |
| 51.0 | 354.7 | 201.1 | .97 | NA | SAND to SILTY SAND |
| 51.5 | 418.1 | 236.2 | 1.02 | NA | SAND to SILTY SAND |
| 52.0 | 393.2 | 221.3 | .90 | NA | SAND to SILTY SAND |
| 52.5 | 332.9 | 186.8 | 1.49 | NA | SAND to SILTY SAND |
| 53.0 | 321.6 | 179.9 | 1.21 | NA | SAND to SILTY SAND |
| 53.5 | 280.7 | 156.5 | 1.09 | NA | SAND to SILTY SAND |
| 54.0 | 285.5 | 158.6 | 1.65 | NA | SAND to SILTY SAND |
| 54.5 | 286.4 | 158.6 | 1.50 | NA | SAND to SILTY SAND |
| 55.0 | 305.5 | 168.6 | 1.59 | NA | SAND to SILTY SAND |
| 55.5 | 344.0 | 189.2 | 1.53 | NA | SAND to SILTY SAND |

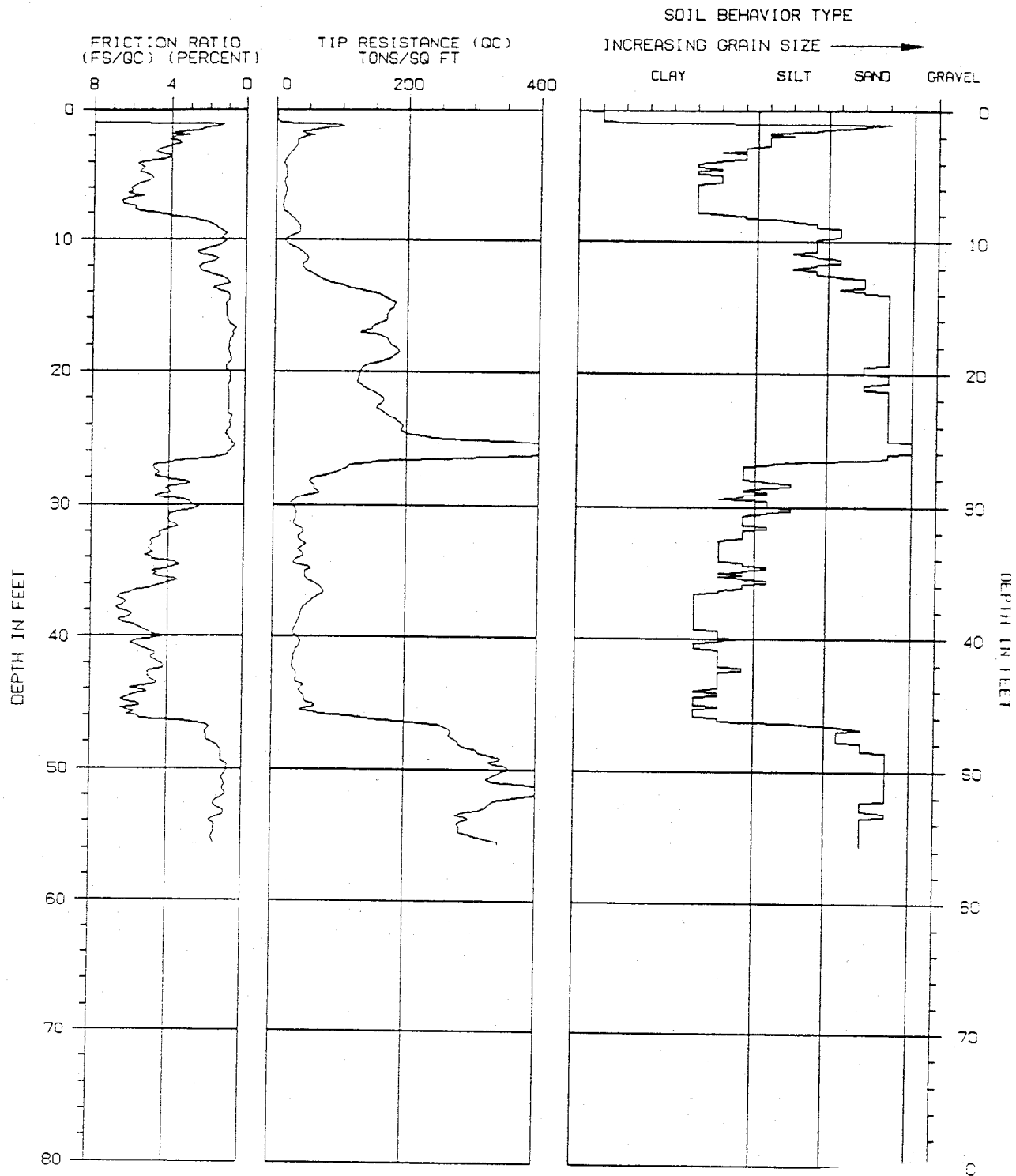
NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002694



MCK0002695

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

CONE PENETRATION TEST


SOUNDING NUMBER: CPT-2

PROJECT NAME : HLA/MCKESSON

LOCATION : SANTA FE SPRINGS

PROJECT NUMBER : 9110-09504

DATE : 04-09-1991

 THE EARTH TECHNOLOGY
CORPORATION

CONE PENETRATION TEST

SOUNDING : CPT-3
 PROJECT : HLA/MCKESSON
 LOCATION : SANTA FE SPRINGS
 DATE : 04-09-1991

PROJECT NO : 9110-09504
 INSTRUMENT : F15CKE091
 SYSTEM : T-2
 OPERATOR : EC/DH/MR

PAGE 1 of 3

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| .0 | .0 | .0 | .00 | NA | |
| .5 | .0 | .0 | .00 | NA | |
| 1.0 | .0 | .0 | .00 | NA | |
| 1.5 | 102.6 | 213.8 | 3.48 | NA | *CLAYEY SAND to SANDY CLAY |
| 2.0 | 67.8 | 132.9 | 2.56 | NA | SILTY SAND to SANDY SILT |
| 2.5 | 45.8 | 85.3 | 4.57 | NA | *SANDY CLAY to SILTY CLAY |
| 3.0 | 31.3 | 55.8 | 4.84 | NA | *SANDY CLAY to SILTY CLAY |
| 3.5 | 23.8 | 40.8 | 4.05 | NA | CLAYEY SILT to SILTY CLAY |
| 4.0 | 20.4 | 33.8 | 4.57 | NA | CLAYEY SILT to SILTY CLAY |
| 4.5 | 20.7 | 33.3 | 4.50 | NA | CLAYEY SILT to SILTY CLAY |
| 5.0 | 19.0 | 29.6 | 4.69 | NA | CLAYEY SILT to SILTY CLAY |
| 5.5 | 21.7 | 33.0 | 6.41 | NA | *SANDY CLAY to SILTY CLAY |
| 6.0 | 20.1 | 29.8 | 6.66 | NA | *SANDY CLAY to SILTY CLAY |
| 6.5 | 20.4 | 29.6 | 6.45 | NA | *SANDY CLAY to SILTY CLAY |
| 7.0 | 16.3 | 23.1 | 7.08 | NA | *SANDY CLAY to SILTY CLAY |
| 7.5 | 14.0 | 19.4 | 7.24 | NA | SILTY CLAY to CLAY |
| 8.0 | 12.9 | 17.5 | 7.74 | NA | SILTY CLAY to CLAY |
| 8.5 | 16.5 | 22.0 | 7.44 | NA | *SANDY CLAY to SILTY CLAY |
| 9.0 | 25.9 | 33.8 | 4.79 | NA | *SANDY CLAY to SILTY CLAY |
| 9.5 | 42.3 | 54.3 | 4.35 | NA | *SANDY CLAY to SILTY CLAY |
| 10.0 | 49.1 | 61.8 | 3.63 | NA | SANDY SILT to CLAYEY SILT |
| 10.5 | 43.2 | 53.5 | 3.54 | NA | SANDY SILT to CLAYEY SILT |
| 11.0 | 41.4 | 50.5 | 5.39 | NA | *SANDY CLAY to SILTY CLAY |
| 11.5 | 45.6 | 54.7 | 6.20 | NA | *SANDY CLAY to SILTY CLAY |
| 12.0 | 35.1 | 41.5 | 7.61 | NA | *SANDY CLAY to SILTY CLAY |
| 12.5 | 29.5 | 34.3 | 7.78 | NA | *SANDY CLAY to SILTY CLAY |
| 13.0 | 7.5 | 8.6 | 8.42 | NA | CLAY to ORGANIC CLAY |
| 13.5 | 8.0 | 9.1 | 8.18 | NA | CLAY to ORGANIC CLAY |
| 14.0 | 15.5 | 17.3 | 7.27 | NA | SILTY CLAY to CLAY |
| 14.5 | 22.2 | 24.4 | 6.87 | NA | *SANDY CLAY to SILTY CLAY |
| 15.0 | 35.2 | 38.1 | 6.39 | NA | *SANDY CLAY to SILTY CLAY |
| 15.5 | 70.7 | 75.6 | 3.27 | NA | SANDY SILT to CLAYEY SILT |
| 16.0 | 91.5 | 96.5 | 2.69 | NA | SILTY SAND to SANDY SILT |
| 16.5 | 90.1 | 93.9 | 2.76 | NA | SILTY SAND to SANDY SILT |
| 17.0 | 85.6 | 88.1 | 2.33 | NA | SILTY SAND to SANDY SILT |
| 17.5 | 75.6 | 76.8 | 2.48 | NA | SILTY SAND to SANDY SILT |
| 18.0 | 72.8 | 73.2 | 2.95 | NA | SANDY SILT to CLAYEY SILT |
| 18.5 | 73.4 | 72.8 | 3.34 | NA | SANDY SILT to CLAYEY SILT |
| 19.0 | 90.7 | 89.0 | 2.45 | NA | SILTY SAND to SANDY SILT |
| 19.5 | 104.3 | 101.2 | 2.35 | NA | SILTY SAND to SANDY SILT |
| 20.0 | 199.2 | 190.9 | 1.19 | NA | SAND to SILTY SAND |

NA = NOT APPLICABLE
 TOP 1.0 FT IS DISTURBED SOIL
 *INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
 ASSUMED TOTAL UNIT WT = 110 PCF
 ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002696

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| 20.5 | 311.6 | 295.4 | .76 | NA | SAND to SILTY SAND |
| 21.0 | 413.4 | 387.5 | .78 | NA | SANDY GRAVEL to SAND |
| 21.5 | 497.4 | 461.2 | .66 | NA | SANDY GRAVEL to SAND |
| 22.0 | 519.4 | 476.4 | .73 | NA | SANDY GRAVEL to SAND |
| 22.5 | 537.4 | 487.7 | .87 | NA | SANDY GRAVEL to SAND |
| 23.0 | 447.2 | 401.6 | .90 | NA | SANDY GRAVEL to SAND |
| 23.5 | 355.2 | 315.6 | .72 | NA | SANDY GRAVEL to SAND |
| 24.0 | 352.6 | 310.1 | .71 | NA | SANDY GRAVEL to SAND |
| 24.5 | 361.0 | 314.2 | .98 | NA | SANDY GRAVEL to SAND |
| 25.0 | 149.0 | 128.4 | 2.92 | NA | SAND to SILTY SAND |
| 25.5 | 129.8 | 110.8 | 4.32 | NA | *SILTY SAND to CLAYEY SAND |
| 26.0 | 191.9 | 162.1 | 3.38 | NA | *CLAYEY SAND to SANDY CLAY |
| 26.5 | 161.4 | 135.0 | 3.87 | NA | *CLAYEY SAND to SANDY CLAY |
| 27.0 | 162.4 | 134.5 | 4.34 | NA | *CLAYEY SAND to SANDY CLAY |
| 27.5 | 99.5 | 81.6 | 5.33 | NA | *CLAYEY SAND to SANDY CLAY |
| 28.0 | 76.8 | 62.4 | 5.03 | NA | *SANDY CLAY to SILTY CLAY |
| 28.5 | 74.6 | 60.1 | 4.88 | NA | *SANDY CLAY to SILTY CLAY |
| 29.0 | 103.8 | 82.7 | 5.97 | NA | *SANDY CLAY to SILTY CLAY |
| 29.5 | 72.8 | 57.5 | 5.91 | NA | *SANDY CLAY to SILTY CLAY |
| 30.0 | 92.3 | 72.2 | 3.71 | NA | *SANDY CLAY to SILTY CLAY |
| 30.5 | 63.2 | 49.0 | 5.58 | NA | *CLAYEY SAND to SANDY CLAY |
| 31.0 | 63.0 | 48.4 | 4.53 | NA | *SANDY CLAY to SILTY CLAY |
| 31.5 | 54.0 | 41.1 | 5.78 | NA | *SANDY CLAY to SILTY CLAY |
| 32.0 | 47.5 | 35.8 | 5.18 | NA | *SANDY CLAY to SILTY CLAY |
| 32.5 | 43.7 | 32.7 | 5.41 | NA | *SANDY CLAY to SILTY CLAY |
| 33.0 | 36.2 | 26.8 | 5.00 | NA | *SANDY CLAY to SILTY CLAY |
| 33.5 | 34.4 | 25.3 | 5.57 | NA | CLAYEY SILT to SILTY CLAY |
| 34.0 | 36.2 | 26.4 | 5.40 | NA | SILTY CLAY TO CLAY |
| 34.5 | 44.7 | 32.3 | 7.19 | NA | CLAYEY SILT to SILTY CLAY |
| 35.0 | 44.2 | 31.7 | 7.52 | NA | *SANDY CLAY to SILTY CLAY |
| 35.5 | 34.9 | 24.8 | 7.78 | NA | *SANDY CLAY to SILTY CLAY |
| 36.0 | 46.6 | 32.8 | 3.84 | NA | *SANDY CLAY to SILTY CLAY |
| 36.5 | 38.4 | 26.8 | 4.57 | NA | CLAYEY SILT to SILTY CLAY |
| 37.0 | 65.9 | 45.5 | 5.44 | NA | CLAYEY SILT to SILTY CLAY |
| 37.5 | 50.2 | 34.4 | 5.44 | NA | *SANDY CLAY to SILTY CLAY |
| 38.0 | 46.9 | 31.9 | 5.46 | NA | *SANDY CLAY to SILTY CLAY |
| 38.5 | 50.6 | 34.1 | 6.29 | NA | *SANDY CLAY to SILTY CLAY |
| 39.0 | 61.4 | 41.1 | 8.11 | NA | *SANDY CLAY to SILTY CLAY |
| 39.5 | 51.5 | 34.2 | 7.71 | NA | *SANDY CLAY to SILTY CLAY |
| 40.0 | 47.9 | 31.5 | 6.66 | NA | *SANDY CLAY to SILTY CLAY |
| 40.5 | 40.1 | 26.2 | 7.69 | NA | *SANDY CLAY to SILTY CLAY |
| 41.0 | 35.6 | 23.0 | 6.19 | NA | *SANDY CLAY to SILTY CLAY |
| 41.5 | 32.3 | 20.7 | 5.62 | NA | *SANDY CLAY to SILTY CLAY |
| 42.0 | 28.1 | 17.9 | 4.33 | NA | SILTY CLAY TO CLAY |
| 42.5 | 31.5 | 19.9 | 4.72 | NA | CLAYEY SILT to SILTY CLAY |
| 43.0 | 34.8 | 21.8 | 4.63 | NA | CLAYEY SILT to SILTY CLAY |
| 43.5 | 48.7 | 30.2 | 5.20 | NA | CLAYEY SILT to SILTY CLAY |
| 44.0 | 67.3 | 41.5 | 6.92 | NA | *SANDY CLAY to SILTY CLAY |
| 44.5 | 34.0 | 20.8 | 7.22 | NA | *SANDY CLAY to SILTY CLAY |
| 45.0 | 36.4 | 22.1 | 5.84 | NA | *SANDY CLAY to SILTY CLAY |
| | | | | | SILTY CLAY TO CLAY |

NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002697

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|---------------------------|
| 45.5 | 31.6 | 19.0 | 5.70 | NA | SILTY CLAY TO CLAY |
| 46.0 | 34.6 | 20.6 | 4.89 | NA | CLAYEY SILT to SILTY CLAY |
| 46.5 | 32.2 | 19.0 | 5.07 | NA | CLAYEY SILT to SILTY CLAY |
| 47.0 | 33.7 | 19.8 | 5.74 | NA | SILTY CLAY TO CLAY |
| 47.5 | 33.4 | 19.5 | 5.49 | NA | SILTY CLAY TO CLAY |
| 48.0 | 29.0 | 16.8 | 5.88 | NA | SILTY CLAY TO CLAY |
| 48.5 | 25.7 | 14.8 | 5.59 | NA | SILTY CLAY TO CLAY |
| 49.0 | 28.8 | 16.5 | 5.96 | NA | SILTY CLAY TO CLAY |
| 49.5 | 29.1 | 16.7 | 4.87 | NA | SILTY CLAY TO CLAY |
| 50.0 | 34.5 | 19.7 | 5.72 | NA | CLAYEY SILT to SILTY CLAY |
| 50.5 | 33.5 | 19.1 | 6.11 | NA | SILTY CLAY TO CLAY |
| 51.0 | 29.8 | 16.9 | 4.70 | NA | SILTY CLAY TO CLAY |
| 51.5 | 45.5 | 25.7 | 4.49 | NA | CLAYEY SILT to SILTY CLAY |
| 52.0 | 228.9 | 128.9 | 1.73 | NA | CLAYEY SILT to SILTY CLAY |
| 52.5 | 384.1 | 215.5 | 1.04 | NA | SAND to SILTY SAND |
| 53.0 | 403.2 | 225.5 | .70 | NA | SAND to SILTY SAND |
| 53.5 | 395.2 | 220.3 | .65 | NA | SAND to SILTY SAND |
| 54.0 | 448.5 | 249.1 | .71 | NA | SAND to SILTY SAND |
| 54.5 | 450.0 | 249.2 | 1.47 | NA | SAND to SILTY SAND |
| 55.0 | 395.1 | 218.0 | 1.35 | NA | SAND to SILTY SAND |
| 55.5 | 376.5 | 207.0 | 1.26 | NA | SAND to SILTY SAND |

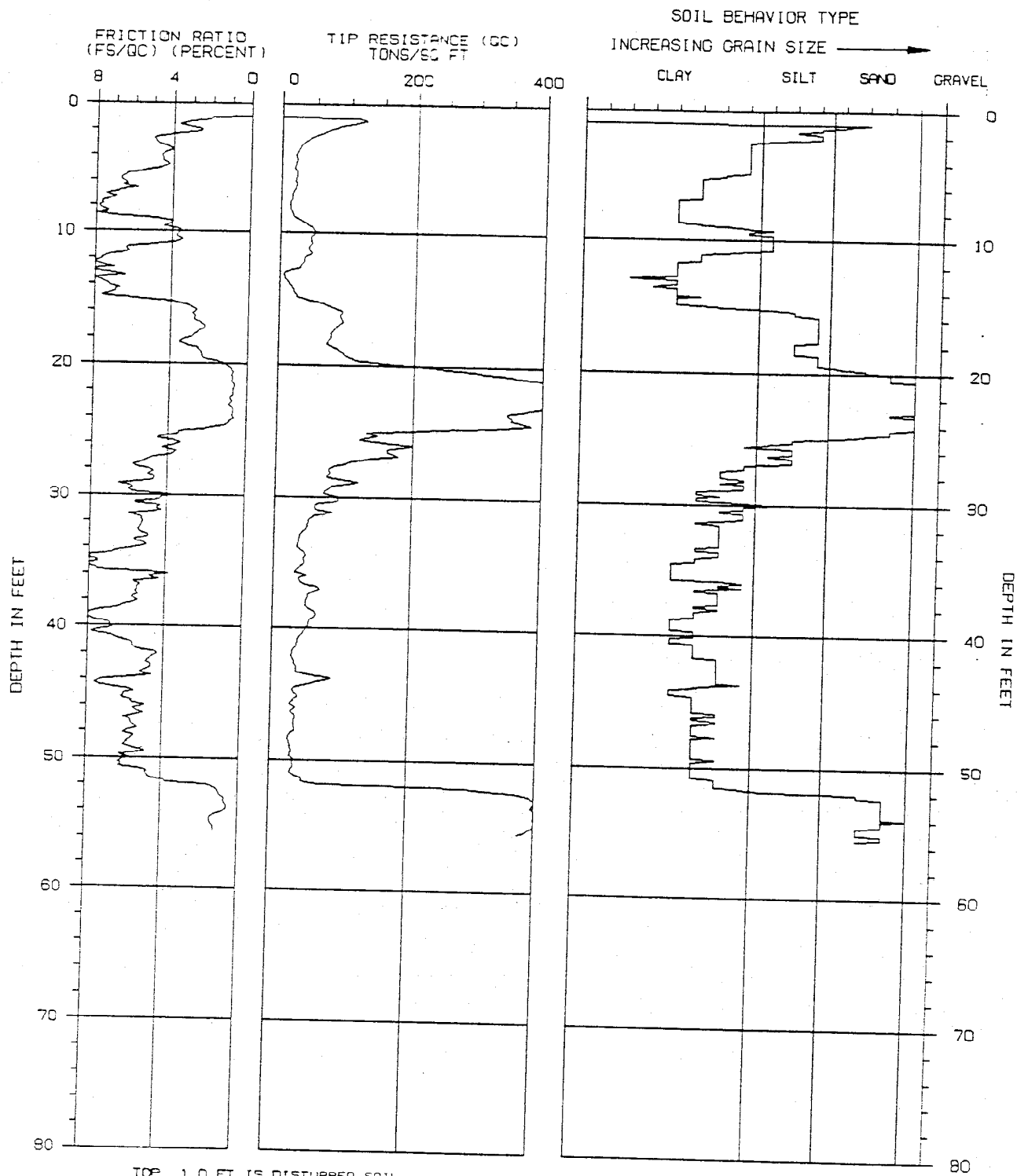
NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002698



CONE PENETRATION TEST

SOUNDING NUMBER: CPT-3

PROJECT NAME : HLA/MCKESSON

LOCATION : SANTA FE SPRINGS

PROJECT NUMBER : 9110-09504

DATE : 04-09-1991

THE EARTH TECHNOLOGY CORPORATION

MCK0002699

 *
 *
 *
 * SOUNDING : CPT-4 PROJECT NO : 9110-09504
 * PROJECT : HLA/MCKESSON INSTRUMENT : F15CKE091
 * LOCATION : SANTA FE SPRINGS SYSTEM : T-2
 * DATE : 04-09-1991 OPERATOR : EC/DH/MR
 *

PAGE 1 of 3

| DEPTH | TIP RESISTANCE | NORMALIZED | FRICTION | CONE PORE | SOIL BEHAVIOR TYPE |
|-------|----------------|----------------|----------|-----------|----------------------------|
| (ft) | (tsf) | TIP RESISTANCE | RATIO | PRESSURE | |
| ----- | ----- | (tsf) | (%) | (tsf) | ----- |
| .0 | .0 | .0 | .00 | NA | |
| .5 | .0 | .0 | .00 | NA | |
| 1.0 | .0 | .0 | .00 | NA | |
| 1.5 | 24.4 | 50.7 | 3.42 | NA | SANDY SILT to CLAYEY SILT |
| 2.0 | 101.8 | 199.5 | 2.52 | NA | *SILTY SAND to CLAYEY SAND |
| 2.5 | 55.7 | 103.8 | 2.87 | NA | SILTY SAND to SANDY SILT |
| 3.0 | 22.8 | 40.7 | 3.50 | NA | SANDY SILT to CLAYEY SILT |
| 3.5 | 20.0 | 34.3 | 3.42 | NA | SANDY SILT to CLAYEY SILT |
| 4.0 | 16.1 | 26.6 | 3.54 | NA | SANDY SILT to CLAYEY SILT |
| 4.5 | 14.2 | 22.8 | 4.79 | NA | CLAYEY SILT to SILTY CLAY |
| 5.0 | 14.7 | 22.9 | 4.37 | NA | CLAYEY SILT to SILTY CLAY |
| 5.5 | 13.9 | 21.1 | 4.70 | NA | CLAYEY SILT to SILTY CLAY |
| 6.0 | 15.3 | 22.6 | 3.98 | NA | CLAYEY SILT to SILTY CLAY |
| 6.5 | 11.1 | 16.1 | 6.41 | NA | SILTY CLAY TO CLAY |
| 7.0 | 8.9 | 12.5 | 7.05 | NA | SILTY CLAY TO CLAY |
| 7.5 | 6.2 | 8.6 | 8.64 | NA | CLAY TO ORGANIC CLAY |
| 8.0 | 4.9 | 6.7 | 8.65 | NA | CLAY TO ORGANIC CLAY |
| 8.5 | 3.7 | 4.9 | 9.14 | NA | ORGANIC MATERIAL |
| 9.0 | 4.5 | 5.9 | 7.30 | NA | SILTY CLAY TO CLAY |
| 9.5 | 25.5 | 32.6 | 5.17 | NA | *SANDY CLAY to SILTY CLAY |
| 10.0 | 49.7 | 62.7 | 6.25 | NA | *SANDY CLAY to SILTY CLAY |
| 10.5 | 79.4 | 98.3 | 7.04 | NA | *SANDY CLAY to SILTY CLAY |
| 11.0 | 113.6 | 138.3 | 6.34 | NA | *SANDY CLAY to SILTY CLAY |
| 11.5 | 95.6 | 114.6 | 6.79 | NA | *SANDY CLAY to SILTY CLAY |
| 12.0 | 102.9 | 121.5 | 4.54 | NA | *SANDY CLAY to SILTY CLAY |
| 12.5 | 103.3 | 120.1 | 2.42 | NA | SILTY SAND to SANDY SILT |
| 13.0 | 184.8 | 211.7 | 1.61 | NA | SAND to SILTY SAND |
| 13.5 | 192.6 | 217.5 | 1.69 | NA | SAND to SILTY SAND |
| 14.0 | 226.8 | 252.6 | 1.38 | NA | SAND to SILTY SAND |
| 14.5 | 254.0 | 279.0 | 1.24 | NA | SAND to SILTY SAND |
| 15.0 | 245.7 | 266.3 | 1.18 | NA | SAND to SILTY SAND |
| 15.5 | 225.0 | 240.6 | 1.50 | NA | SAND to SILTY SAND |
| 16.0 | 231.1 | 244.0 | 1.15 | NA | SAND to SILTY SAND |
| 16.5 | 254.0 | 264.7 | .73 | NA | SAND to SILTY SAND |
| 17.0 | 258.2 | 265.7 | .85 | NA | SAND to SILTY SAND |
| 17.5 | 242.8 | 246.8 | .96 | NA | SAND to SILTY SAND |
| 18.0 | 223.5 | 224.4 | 1.21 | NA | SAND to SILTY SAND |
| 18.5 | 236.7 | 234.9 | 1.15 | NA | SAND to SILTY SAND |
| 19.0 | 265.2 | 260.2 | 1.31 | NA | SAND to SILTY SAND |
| 19.5 | 295.3 | 286.4 | 1.11 | NA | SAND to SILTY SAND |
| 20.0 | 293.4 | 281.2 | 1.08 | NA | SAND to SILTY SAND |

NA = NOT APPLICABLE

TOP 1.0 FT IS DISTURBED SOIL

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002700

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|--------------------|
| 20.5 | 292.2 | 276.9 | .96 | NA | SAND to SILTY SAND |
| 21.0 | 240.7 | 225.6 | 1.23 | NA | SAND to SILTY SAND |
| 21.5 | 291.6 | 270.4 | .97 | NA | SAND to SILTY SAND |
| 22.0 | 247.5 | 227.0 | 1.13 | NA | SAND to SILTY SAND |
| 22.5 | 243.0 | 220.5 | 1.22 | NA | SAND to SILTY SAND |
| 23.0 | 242.6 | 217.8 | 1.20 | NA | SAND to SILTY SAND |
| 23.5 | 245.0 | 217.7 | 1.04 | NA | SAND to SILTY SAND |
| 24.0 | 241.9 | 212.7 | 1.17 | NA | SAND to SILTY SAND |
| 24.5 | 241.4 | 210.1 | 1.29 | NA | SAND to SILTY SAND |
| 25.0 | 230.9 | 199.0 | 1.31 | NA | SAND to SILTY SAND |
| 25.5 | 239.5 | 204.3 | 1.17 | NA | SAND to SILTY SAND |
| 26.0 | 176.1 | 148.7 | 1.18 | NA | SAND to SILTY SAND |
| 26.5 | 104.3 | 87.2 | 1.05 | NA | SAND to SILTY SAND |
| 27.0 | 53.0 | 43.9 | 2.36 | NA | SAND to SILTY SAND |
| 27.5 | 56.2 | 46.1 | 1.97 | NA | SAND to SILTY SAND |
| 28.0 | 155.6 | 126.4 | 1.92 | NA | SAND to SILTY SAND |
| 28.5 | 49.0 | 39.4 | 3.85 | NA | SAND to SILTY SAND |
| 29.0 | 47.1 | 37.5 | 3.20 | NA | SAND to SILTY SAND |
| 29.5 | 43.7 | 34.5 | 3.04 | NA | SAND to SILTY SAND |
| 30.0 | 44.0 | 34.5 | 3.77 | NA | SAND to SILTY SAND |
| 30.5 | 43.6 | 33.8 | 3.92 | NA | SAND to SILTY SAND |
| 31.0 | 39.9 | 30.6 | 4.29 | NA | SAND to SILTY SAND |
| 31.5 | 29.4 | 22.4 | 4.39 | NA | SAND to SILTY SAND |
| 32.0 | 26.1 | 19.7 | 3.55 | NA | SAND to SILTY SAND |
| 32.5 | 28.1 | 21.0 | 3.21 | NA | SAND to SILTY SAND |
| 33.0 | 35.4 | 26.2 | 3.17 | NA | SAND to SILTY SAND |
| 33.5 | 44.5 | 32.7 | 7.15 | NA | SAND to SILTY SAND |
| 34.0 | 82.8 | 60.3 | 5.65 | NA | SAND to SILTY SAND |
| 34.5 | 101.8 | 73.5 | 5.73 | NA | SAND to SILTY SAND |
| 35.0 | 38.5 | 27.5 | 6.45 | NA | SAND to SILTY SAND |
| 35.5 | 34.9 | 24.8 | 6.02 | NA | SAND to SILTY SAND |
| 36.0 | 36.7 | 25.8 | 5.87 | NA | SAND to SILTY SAND |
| 36.5 | 35.8 | 25.0 | 9.07 | NA | SAND to SILTY SAND |
| 37.0 | 38.3 | 26.5 | 8.06 | NA | SAND to SILTY SAND |
| 37.5 | 37.8 | 25.9 | 7.21 | NA | SAND to SILTY SAND |
| 38.0 | 41.7 | 28.4 | 7.06 | NA | SAND to SILTY SAND |
| 38.5 | 35.6 | 24.0 | 7.67 | NA | SAND to SILTY SAND |
| 39.0 | 31.7 | 21.2 | 7.19 | NA | SAND to SILTY SAND |
| 39.5 | 29.2 | 19.3 | 5.61 | NA | SAND to SILTY SAND |
| 40.0 | 26.8 | 17.6 | 5.62 | NA | SAND to SILTY SAND |
| 40.5 | 27.6 | 18.0 | 5.62 | NA | SAND to SILTY SAND |
| 41.0 | 28.0 | 18.1 | 4.90 | NA | SAND to SILTY SAND |
| 41.5 | 25.9 | 16.6 | 4.01 | NA | SAND to SILTY SAND |
| 42.0 | 29.2 | 18.6 | 4.16 | NA | SAND to SILTY SAND |
| 42.5 | 30.5 | 19.2 | 4.41 | NA | SAND to SILTY SAND |
| 43.0 | 31.3 | 19.6 | 5.38 | NA | SAND to SILTY SAND |
| 43.5 | 29.3 | 18.2 | 4.32 | NA | SAND to SILTY SAND |
| 44.0 | 33.7 | 20.8 | 4.50 | NA | SAND to SILTY SAND |
| 44.5 | 26.5 | 16.2 | 5.28 | NA | SAND to SILTY SAND |
| 45.0 | 25.3 | 15.3 | 5.14 | NA | SAND to SILTY SAND |

NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002701

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|---------------------------|
| 45.5 | 40.6 | 24.4 | 5.82 | NA | *SANDY CLAY to SILTY CLAY |
| 46.0 | 54.4 | 32.5 | 6.26 | NA | *SANDY CLAY to SILTY CLAY |
| 46.5 | 50.1 | 29.7 | 7.57 | NA | *SANDY CLAY to SILTY CLAY |
| 47.0 | 32.6 | 19.2 | 5.96 | NA | SILTY CLAY to CLAY |
| 47.5 | 86.8 | 50.6 | 3.94 | NA | SANDY SILT to CLAYEY SILT |
| 48.0 | 211.8 | 122.5 | 2.13 | NA | SILTY SAND to SANDY SILT |
| 48.5 | 237.8 | 137.1 | 2.50 | NA | SILTY SAND to SANDY SILT |
| 49.0 | 255.6 | 146.9 | 2.08 | NA | SILTY SAND to SANDY SILT |
| 49.5 | 321.8 | 184.2 | 1.13 | NA | SAND to SILTY SAND |
| 50.0 | 384.5 | 219.4 | .96 | NA | SAND to SILTY SAND |
| 50.5 | 363.3 | 206.6 | 1.13 | NA | SAND to SILTY SAND |
| 51.0 | 321.9 | 182.5 | 1.65 | NA | SAND to SILTY SAND |
| 51.5 | 300.5 | 169.8 | 1.85 | NA | SAND to SILTY SAND |
| 52.0 | 285.9 | 161.0 | 1.83 | NA | SAND to SILTY SAND |
| 52.5 | 386.1 | 216.6 | 1.03 | NA | SAND to SILTY SAND |
| 53.0 | 358.5 | 200.5 | .56 | NA | SAND to SILTY SAND |
| 53.5 | 352.6 | 196.5 | .80 | NA | SAND to SILTY SAND |
| 54.0 | 339.3 | 188.5 | .63 | NA | SAND to SILTY SAND |
| 54.5 | 345.7 | 191.4 | .56 | NA | SAND to SILTY SAND |
| 55.0 | 384.9 | 212.4 | .48 | NA | SANDY GRAVEL to SAND |
| 55.5 | 384.8 | 211.7 | .52 | NA | SANDY GRAVEL to SAND |

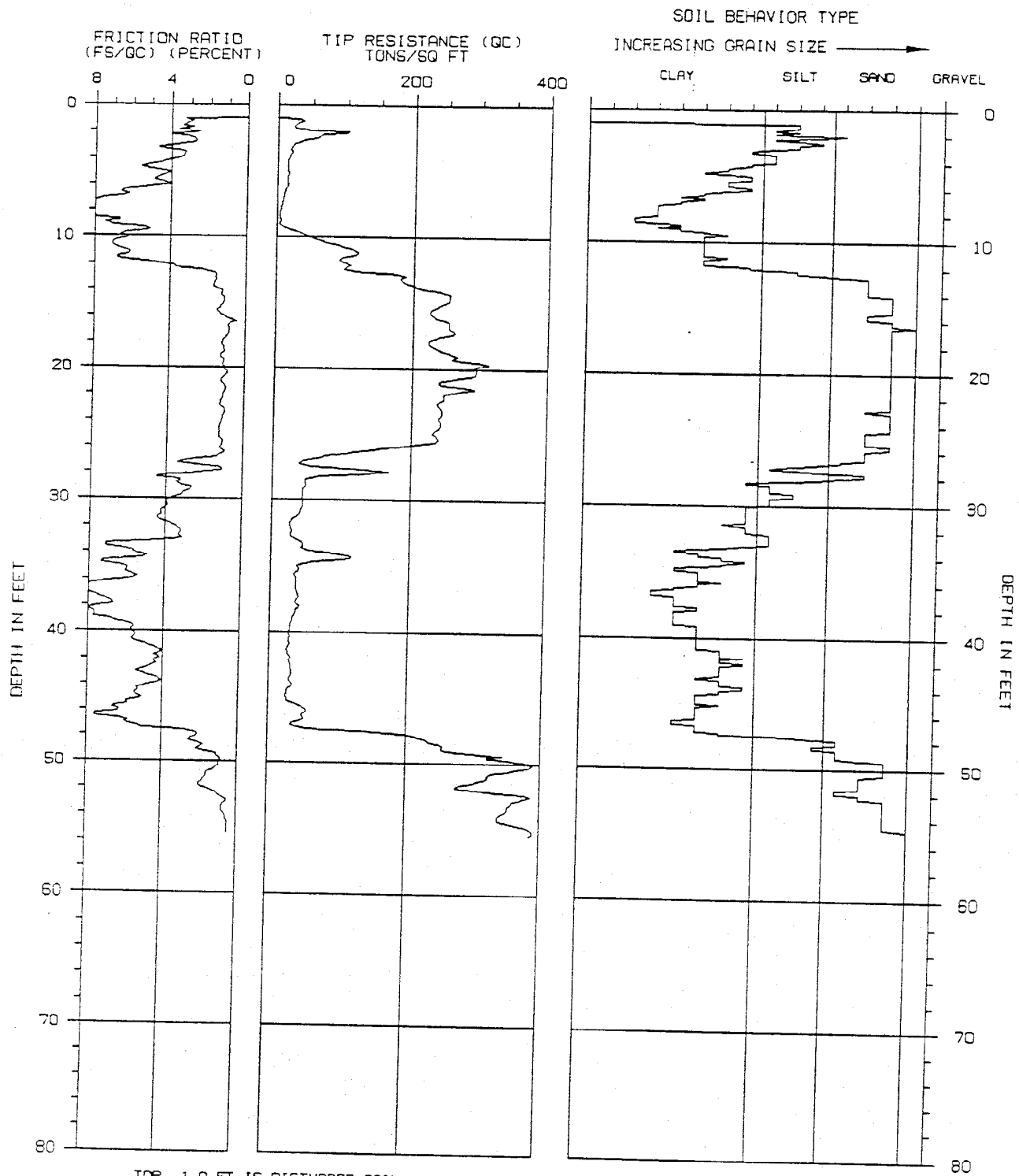
NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002702



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

CONE PENETRATION TEST


SOUNDING NUMBER: CPT-4

PROJECT NAME : HLA/MCKESSON

LOCATION : SANTA FE SPRINGS

PROJECT NUMBER : 9110-09504

DATE : 04-09-1991

 THE EARTH TECHNOLOGY
CORPORATION

MCK0002703

CONE PENETRATION TEST

| | |
|-------------------------------|-------------------------|
| * SOUNDING : CPT-5 | PROJECT NO : 9110-09504 |
| * PROJECT : HLA/MCKESSON | INSTRUMENT : F15CKE091 |
| * LOCATION : SANTA FE SPRINGS | SYSTEM : T-2 |
| * DATE : 04-09-1991 | OPERATOR : EC/DH/MR |

PAGE 1 of 2

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| 0.0 | 0.0 | 0.0 | 0.00 | NA | |
| 1.0 | 39.9 | 90.1 | 3.61 | NA | *CLAYEY SAND to SANDY CLAY |
| 2.0 | 67.7 | 132.7 | 2.30 | NA | SILTY SAND to SANDY SILT |
| 3.0 | 36.6 | 65.2 | 2.88 | NA | SANDY SILT to CLAYEY SILT |
| 4.0 | 61.1 | 101.3 | 2.67 | NA | SILTY SAND to SANDY SILT |
| 5.0 | 24.5 | 38.2 | 3.23 | NA | SANDY SILT to CLAYEY SILT |
| 6.0 | 15.1 | 22.3 | 3.13 | NA | SANDY SILT to CLAYEY SILT |
| 7.0 | 17.8 | 25.1 | 5.53 | NA | SILTY CLAY to CLAY |
| 8.0 | 119.1 | 161.6 | 3.31 | NA | *CLAYEY SAND to SANDY CLAY |
| 9.0 | 113.1 | 147.7 | 5.01 | NA | *SANDY CLAY to SILTY CLAY |
| 10.0 | 100.6 | 126.7 | 5.06 | NA | *SANDY CLAY to SILTY CLAY |
| 11.0 | 109.7 | 133.6 | 3.46 | NA | *CLAYEY SAND to SANDY CLAY |
| 12.0 | 100.9 | 119.1 | 2.28 | NA | SILTY SAND to SANDY SILT |
| 13.0 | 125.3 | 143.5 | 1.46 | NA | SAND to SILTY SAND |
| 14.0 | 129.9 | 144.6 | 1.19 | NA | SAND to SILTY SAND |
| 15.0 | 206.8 | 224.0 | .95 | NA | SAND to SILTY SAND |
| 16.0 | 325.3 | 343.3 | .86 | NA | SAND to SILTY SAND |
| 17.0 | 345.4 | 355.5 | .79 | NA | SANDY GRAVEL to SAND |
| 18.0 | 264.8 | 265.9 | 1.15 | NA | SAND to SILTY SAND |
| 19.0 | 281.4 | 276.1 | .83 | NA | SAND to SILTY SAND |
| 20.0 | 305.9 | 293.2 | .71 | NA | SANDY GRAVEL to SAND |
| 21.0 | 173.1 | 162.3 | 1.79 | NA | SAND to SILTY SAND |
| 22.0 | 145.4 | 133.4 | 3.06 | NA | *SILTY SAND to CLAYEY SAND |
| 23.0 | 123.3 | 110.7 | 4.18 | NA | *CLAYEY SAND to SANDY CLAY |
| 24.0 | 81.5 | 71.7 | 3.95 | NA | *CLAYEY SAND to SANDY CLAY |
| 25.0 | 61.1 | 52.6 | 4.40 | NA | *SANDY CLAY to SILTY CLAY |
| 26.0 | 59.9 | 50.6 | 4.39 | NA | *SANDY CLAY to SILTY CLAY |
| 27.0 | 58.6 | 48.5 | 4.04 | NA | *CLAYEY SAND to SANDY CLAY |
| 28.0 | 46.6 | 37.9 | 4.86 | NA | *SANDY CLAY to SILTY CLAY |
| 29.0 | 32.5 | 25.9 | 4.25 | NA | CLAYEY SILT to SILTY CLAY |
| 30.0 | 31.8 | 24.9 | 4.81 | NA | CLAYEY SILT to SILTY CLAY |
| 31.0 | 29.5 | 22.7 | 4.51 | NA | CLAYEY SILT to SILTY CLAY |
| 32.0 | 54.6 | 41.2 | 5.85 | NA | *SANDY CLAY to SILTY CLAY |
| 33.0 | 57.6 | 42.7 | 6.17 | NA | *SANDY CLAY to SILTY CLAY |
| 34.0 | 46.0 | 33.5 | 8.62 | NA | *SANDY CLAY to SILTY CLAY |
| 35.0 | 51.1 | 36.5 | 7.08 | NA | *SANDY CLAY to SILTY CLAY |
| 36.0 | 40.3 | 28.3 | 7.35 | NA | *SANDY CLAY to SILTY CLAY |
| 37.0 | 37.8 | 26.1 | 6.26 | NA | *SANDY CLAY to SILTY CLAY |
| 38.0 | 32.7 | 22.2 | 6.42 | NA | *SANDY CLAY to SILTY CLAY |
| 39.0 | 42.1 | 28.1 | 5.90 | NA | *SANDY CLAY to SILTY CLAY |
| 40.0 | 41.1 | 27.0 | 5.19 | NA | CLAYEY SILT to SILTY CLAY |

NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002704

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SOUNDING : CPT-5

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| 41.0 | 46.0 | 29.7 | 4.10 | NA | CLAYEY SILT to SILTY CLAY |
| 42.0 | 36.1 | 23.0 | 3.46 | NA | SANDY SILT to CLAYEY SILT |
| 43.0 | 39.8 | 24.9 | 3.42 | NA | SANDY SILT to CLAYEY SILT |
| 44.0 | 38.9 | 23.9 | 4.80 | NA | CLAYEY SILT to SILTY CLAY |
| 45.0 | 105.9 | 64.2 | 2.87 | NA | SANDY SILT to CLAYEY SILT |
| 46.0 | 338.5 | 202.0 | 2.11 | NA | SILTY SAND to SANDY SILT |
| 47.0 | 401.1 | 235.7 | 2.53 | NA | *SILTY SAND to CLAYEY SAND |
| 48.0 | 310.2 | 179.4 | 2.98 | NA | *SILTY SAND to CLAYEY SAND |
| 49.0 | 442.4 | 254.2 | 2.06 | NA | *SAND to SILTY SAND |
| 50.0 | 434.7 | 248.0 | 1.01 | NA | SAND to SILTY SAND |
| 51.0 | 392.4 | 222.4 | 1.12 | NA | SAND to SILTY SAND |
| 52.0 | 395.9 | 222.9 | .75 | NA | SAND to SILTY SAND |
| 53.0 | 402.2 | 224.9 | .69 | NA | SAND to SILTY SAND |
| 54.0 | 424.5 | 235.8 | .35 | NA | SANDY GRAVEL to SAND |
| 55.0 | 455.3 | 251.2 | .53 | NA | SANDY GRAVEL to SAND |

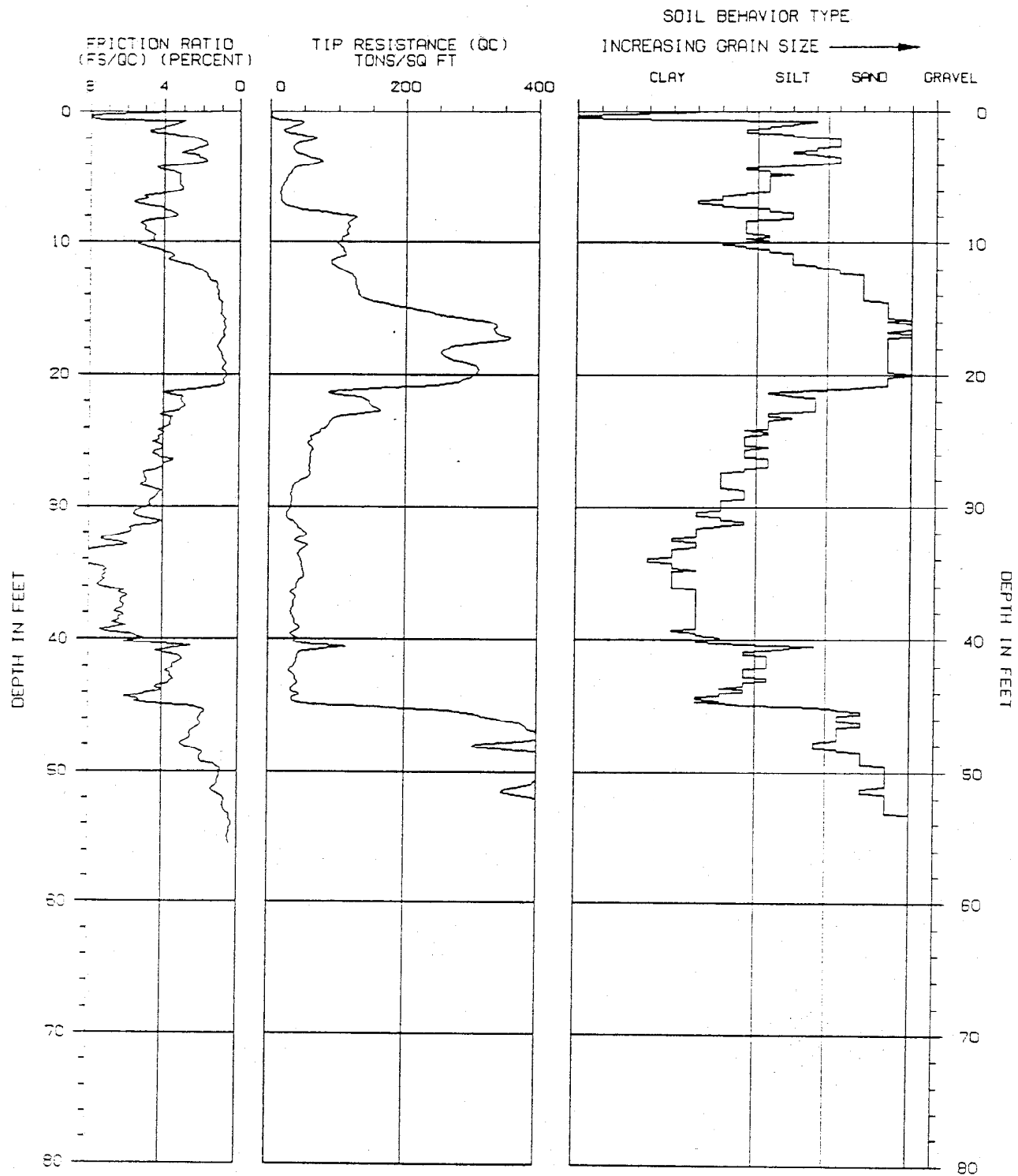
NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002705



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

CONE PENETRATION TEST


SOUNDING NUMBER: CPT-5

PROJECT NAME : HLA/MCKESSON

LOCATION : SANTA FE SPRINGS

PROJECT NUMBER : 9110-09504

DATE : 04-09-1991

 THE EARTH TECHNOLOGY CORPORATION

MCK0002706


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*****  
*                                     *  
*                                CONE PENETRATION TEST                        *  
*                                     *  
* SOUNDING   : CPT-6                 PROJECT NO   : 9110-09504             *  
* PROJECT    : HLA/MCKESSON          INSTRUMENT   : F15CKE091            *  
* LOCATION   : SANTA FE SPRINGS      SYSTEM       : T-2                  *  
* DATE       : 04-10-1991            OPERATOR     : EC/DH/MR              *  
*                                     *  
*****
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| DEPTH | TIP RESISTANCE | NORMALIZED | FRICTION | CONE PORE | SOIL BEHAVIOR TYPE |
|-------|----------------|-------------------------|--------------|-------------------|----------------------------|
| (ft) | (tsf) | TIP RESISTANCE
(tsf) | RATIO
(%) | PRESSURE
(tsf) | |
| .0 | .0 | .0 | .00 | NA | |
| .5 | .0 | .0 | .00 | NA | |
| 1.0 | .0 | .0 | .00 | NA | |
| 1.5 | 82.9 | 172.7 | 2.84 | NA | *SILTY SAND to CLAYEY SAND |
| 2.0 | 35.1 | 68.7 | 4.44 | NA | *SANDY CLAY to SILTY CLAY |
| 2.5 | 27.4 | 50.9 | 5.26 | NA | *SANDY CLAY to SILTY CLAY |
| 3.0 | 21.1 | 37.6 | 5.27 | NA | *SANDY CLAY to SILTY CLAY |
| 3.5 | 14.3 | 24.5 | 4.76 | NA | CLAYEY SILT to SILTY CLAY |
| 4.0 | 14.3 | 23.7 | 5.10 | NA | CLAYEY SILT to SILTY CLAY |
| 4.5 | 15.8 | 25.4 | 5.02 | NA | CLAYEY SILT to SILTY CLAY |
| 5.0 | 14.5 | 22.7 | 5.49 | NA | SILTY CLAY TO CLAY |
| 5.5 | 15.7 | 23.9 | 5.22 | NA | CLAYEY SILT to SILTY CLAY |
| 6.0 | 15.3 | 22.6 | 4.88 | NA | CLAYEY SILT to SILTY CLAY |
| 6.5 | 13.5 | 19.5 | 5.02 | NA | CLAYEY SILT to SILTY CLAY |
| 7.0 | 12.9 | 18.2 | 4.50 | NA | CLAYEY SILT to SILTY CLAY |
| 7.5 | 13.1 | 18.1 | 5.20 | NA | CLAYEY SILT to SILTY CLAY |
| 8.0 | 16.6 | 22.5 | 5.85 | NA | SILTY CLAY TO CLAY |
| 8.5 | 27.6 | 36.7 | 4.59 | NA | *SANDY CLAY to SILTY CLAY |
| 9.0 | 38.2 | 49.9 | 4.93 | NA | *SANDY CLAY to SILTY CLAY |
| 9.5 | 45.1 | 57.8 | 5.79 | NA | *SANDY CLAY to SILTY CLAY |
| 10.0 | 44.9 | 56.6 | 5.81 | NA | *SANDY CLAY to SILTY CLAY |
| 10.5 | 42.8 | 53.0 | 6.80 | NA | *SANDY CLAY to SILTY CLAY |
| 11.0 | 39.9 | 48.6 | 6.98 | NA | *SANDY CLAY to SILTY CLAY |
| 11.5 | 26.8 | 32.1 | 7.15 | NA | *SANDY CLAY to SILTY CLAY |
| 12.0 | 27.5 | 32.4 | 6.14 | NA | *SANDY CLAY to SILTY CLAY |
| 12.5 | 24.8 | 28.9 | 5.58 | NA | *SANDY CLAY to SILTY CLAY |
| 13.0 | 19.3 | 22.1 | 4.87 | NA | CLAYEY SILT to SILTY CLAY |
| 13.5 | 15.6 | 17.6 | 4.49 | NA | CLAYEY SILT to SILTY CLAY |
| 14.0 | 16.1 | 17.9 | 6.66 | NA | SILTY CLAY TO CLAY |
| 14.5 | 14.6 | 16.1 | 7.65 | NA | SILTY CLAY TO CLAY |
| 15.0 | 26.8 | 29.1 | 7.69 | NA | *SANDY CLAY to SILTY CLAY |
| 15.5 | 33.8 | 36.1 | 5.99 | NA | *SANDY CLAY to SILTY CLAY |
| 16.0 | 77.8 | 82.1 | 3.63 | NA | *CLAYEY SAND to SANDY CLAY |
| 16.5 | 149.9 | 156.2 | 1.62 | NA | SAND to SILTY SAND |
| 17.0 | 141.3 | 145.5 | 1.73 | NA | SAND to SILTY SAND |
| 17.5 | 98.6 | 100.2 | 3.71 | NA | *CLAYEY SAND to SANDY CLAY |
| 18.0 | 140.6 | 141.2 | 1.46 | NA | SAND to SILTY SAND |
| 18.5 | 132.7 | 131.7 | 1.35 | NA | SAND to SILTY SAND |
| 19.0 | 223.1 | 218.8 | 1.00 | NA | SAND to SILTY SAND |
| 19.5 | 320.7 | 310.9 | .85 | NA | SAND to SILTY SAND |
| 20.0 | 383.3 | 367.5 | 1.20 | NA | SAND to SILTY SAND |

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| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| 20.5 | 319.6 | 302.9 | 1.64 | NA | SAND to SILTY SAND |
| 21.0 | 240.5 | 225.5 | 2.06 | NA | SAND to SILTY SAND |
| 21.5 | 281.3 | 260.8 | 1.33 | NA | SAND to SILTY SAND |
| 22.0 | 506.7 | 464.8 | .72 | NA | SANDY GRAVEL to SAND |
| 22.5 | 546.1 | 495.6 | .73 | NA | SANDY GRAVEL to SAND |
| 23.0 | 536.8 | 482.0 | .69 | NA | SANDY GRAVEL to SAND |
| 23.5 | 519.7 | 461.8 | .57 | NA | SANDY GRAVEL to SAND |
| 24.0 | 546.6 | 480.7 | .78 | NA | SANDY GRAVEL to SAND |
| 24.5 | 488.7 | 425.4 | .72 | NA | SANDY GRAVEL to SAND |
| 25.0 | 385.6 | 332.3 | .93 | NA | SAND to SILTY SAND |
| 25.5 | 414.2 | 353.3 | .64 | NA | SANDY GRAVEL to SAND |
| 26.0 | 441.7 | 373.1 | 1.01 | NA | SAND to SILTY SAND |
| 26.5 | 419.4 | 350.8 | 1.27 | NA | SAND to SILTY SAND |
| 27.0 | 128.5 | 106.5 | 3.53 | NA | *CLAYEY SAND to SANDY CLAY |
| 27.5 | 106.1 | 87.0 | 3.28 | NA | *CLAYEY SAND to SANDY CLAY |
| 28.0 | 90.3 | 73.4 | 2.88 | NA | SANDY SILT to CLAYEY SILT |
| 28.5 | 74.7 | 60.2 | 2.54 | NA | SILTY SAND to SANDY SILT |
| 29.0 | 66.5 | 53.0 | 1.80 | NA | SILTY SAND to SANDY SILT |
| 29.5 | 83.9 | 66.3 | 2.83 | NA | SANDY SILT to CLAYEY SILT |
| 30.0 | 106.9 | 83.7 | 2.56 | NA | SILTY SAND to SANDY SILT |
| 30.5 | 100.5 | 77.9 | 5.27 | NA | *SANDY CLAY to SILTY CLAY |
| 31.0 | 56.0 | 43.0 | 4.76 | NA | *SANDY CLAY to SILTY CLAY |
| 31.5 | 50.2 | 38.2 | 3.40 | NA | SANDY SILT to CLAYEY SILT |
| 32.0 | 53.1 | 40.0 | 4.25 | NA | CLAYEY SILT to SILTY CLAY |
| 32.5 | 52.0 | 38.9 | 4.60 | NA | *SANDY CLAY to SILTY CLAY |
| 33.0 | 65.5 | 48.5 | 3.86 | NA | SANDY SILT to CLAYEY SILT |
| 33.5 | 76.8 | 56.4 | 5.03 | NA | *SANDY CLAY to SILTY CLAY |
| 34.0 | 82.3 | 59.9 | 6.25 | NA | *SANDY CLAY to SILTY CLAY |
| 34.5 | 80.5 | 58.1 | 7.20 | NA | *SANDY CLAY to SILTY CLAY |
| 35.0 | 82.4 | 59.0 | 7.48 | NA | *SANDY CLAY to SILTY CLAY |
| 35.5 | 52.0 | 36.9 | 7.95 | NA | *SANDY CLAY to SILTY CLAY |
| 36.0 | 55.2 | 38.8 | 5.54 | NA | *SANDY CLAY to SILTY CLAY |
| 36.5 | 55.3 | 38.6 | 5.33 | NA | *SANDY CLAY to SILTY CLAY |
| 37.0 | 49.7 | 34.4 | 3.59 | NA | SANDY SILT to CLAYEY SILT |
| 37.5 | 53.6 | 36.8 | 4.46 | NA | CLAYEY SILT to SILTY CLAY |
| 38.0 | 55.5 | 37.8 | 4.37 | NA | CLAYEY SILT to SILTY CLAY |
| 38.5 | 51.9 | 35.0 | 4.11 | NA | CLAYEY SILT to SILTY CLAY |
| 39.0 | 55.1 | 36.9 | 4.16 | NA | CLAYEY SILT to SILTY CLAY |
| 39.5 | 52.8 | 35.0 | 4.55 | NA | CLAYEY SILT to SILTY CLAY |
| 40.0 | 52.1 | 34.3 | 4.47 | NA | CLAYEY SILT to SILTY CLAY |
| 40.5 | 45.1 | 29.4 | 4.95 | NA | CLAYEY SILT to SILTY CLAY |
| 41.0 | 41.0 | 26.5 | 4.22 | NA | CLAYEY SILT to SILTY CLAY |
| 41.5 | 43.0 | 27.6 | 4.55 | NA | CLAYEY SILT to SILTY CLAY |
| 42.0 | 32.9 | 20.9 | 4.56 | NA | CLAYEY SILT to SILTY CLAY |
| 42.5 | 31.2 | 19.7 | 4.43 | NA | CLAYEY SILT to SILTY CLAY |
| 43.0 | 31.3 | 19.6 | 4.08 | NA | CLAYEY SILT to SILTY CLAY |
| 43.5 | 27.9 | 17.4 | 4.54 | NA | CLAYEY SILT to SILTY CLAY |
| 44.0 | 29.0 | 17.9 | 4.35 | NA | CLAYEY SILT to SILTY CLAY |
| 44.5 | 32.9 | 20.1 | 4.32 | NA | CLAYEY SILT to SILTY CLAY |
| 45.0 | 38.0 | 23.0 | 4.70 | NA | CLAYEY SILT to SILTY CLAY |

NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002708

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| 45.5 | 54.4 | 32.7 | 5.10 | NA | *SANDY CLAY to SILTY CLAY |
| 46.0 | 78.8 | 47.1 | 5.56 | NA | *SANDY CLAY to SILTY CLAY |
| 46.5 | 64.7 | 38.3 | 5.05 | NA | *SANDY CLAY to SILTY CLAY |
| 47.0 | 106.1 | 62.3 | 5.24 | NA | *SANDY CLAY to SILTY CLAY |
| 47.5 | 125.3 | 73.1 | 6.14 | NA | *SANDY CLAY to SILTY CLAY |
| 48.0 | 137.3 | 79.4 | 5.61 | NA | *SANDY CLAY to SILTY CLAY |
| 48.5 | 157.7 | 90.9 | 4.82 | NA | *SANDY CLAY to SILTY CLAY |
| 49.0 | 184.0 | 105.7 | 3.09 | NA | *CLAYEY SAND to SANDY CLAY |
| 49.5 | 231.0 | 132.2 | 1.86 | NA | SILTY SAND to SANDY SILT |
| 50.0 | 226.7 | 129.4 | 1.89 | NA | SILTY SAND to SANDY SILT |
| 50.5 | 223.0 | 126.9 | 2.01 | NA | SILTY SAND to SANDY SILT |
| 51.0 | 233.5 | 132.3 | 1.70 | NA | SAND to SILTY SAND |
| 51.5 | 237.7 | 134.3 | 1.74 | NA | SAND to SILTY SAND |
| 52.0 | 273.4 | 153.9 | 1.17 | NA | SAND to SILTY SAND |
| 52.5 | 293.7 | 164.8 | .96 | NA | SAND to SILTY SAND |
| 53.0 | 295.4 | 165.2 | 1.00 | NA | SAND to SILTY SAND |
| 53.5 | 318.7 | 177.6 | 1.00 | NA | SAND to SILTY SAND |
| 54.0 | 331.4 | 184.1 | .84 | NA | SAND to SILTY SAND |
| 54.5 | 330.8 | 183.2 | 1.19 | NA | SAND to SILTY SAND |
| 55.0 | 343.0 | 189.3 | .92 | NA | SAND to SILTY SAND |
| 55.5 | 346.0 | 190.3 | .87 | NA | SAND to SILTY SAND |

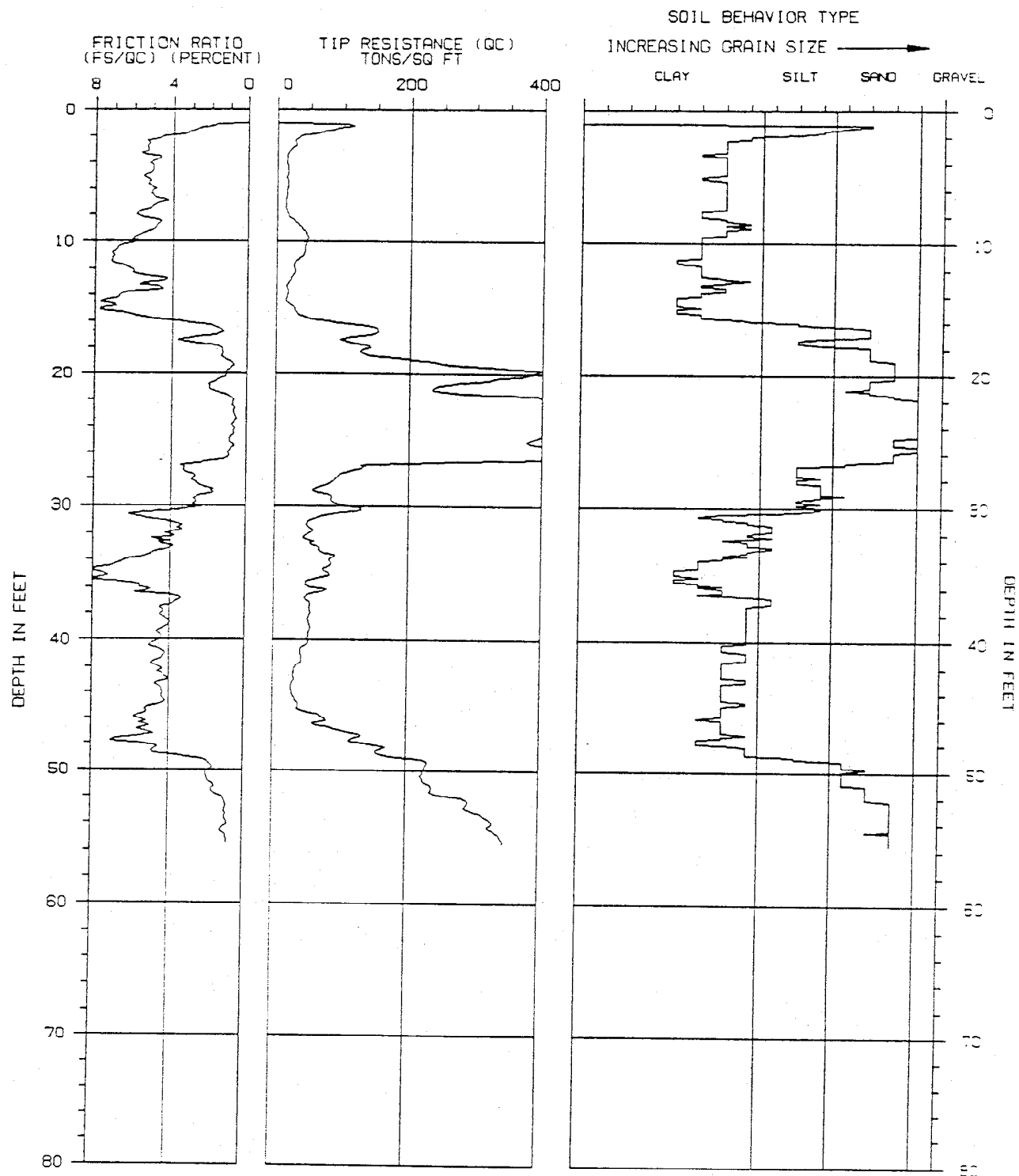
NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002709



TOP 1.0 FT IS DISTURBED SOIL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-6

PROJECT NAME : HLA/MCKESSON

LOCATION : SANTA FE SPRINGS

PROJECT NUMBER : 9110-09504

DATE : 04-10-1991



THE EARTH TECHNOLOGY CORPORATION

MCK0002710

 *
 *
 *
 * CONE PENETRATION TEST *
 *
 * SOUNDING : CPT-7 PROJECT NO : 92-380-09501 *
 * PROJECT : HLA/MC KESSON-II INSTRUMENT : F15CKE091 *
 * LOCATION : SANTA FE SPRGS SYSTEM : T-2 *
 * DATE : 09-10-1991 OPERATOR : MS/AF *
 *

PAGE 1 of 2

| DEPTH | TIP RESISTANCE | NORMALIZED | FRICTION | CONE PORE | SOIL BEHAVIOR TYPE |
|-------|----------------|----------------|----------|-----------|----------------------------|
| (ft) | (tsf) | TIP RESISTANCE | RATIO | PRESSURE | |
| | | (tsf) | (%) | (tsf) | |
| .0 | .0 | .0 | .00 | NA | |
| .5 | .0 | .0 | .00 | NA | |
| 1.0 | .0 | .0 | .00 | NA | |
| 1.5 | .0 | .0 | .00 | NA | |
| 2.0 | .0 | .0 | .00 | NA | |
| 2.5 | .0 | .0 | .00 | NA | |
| 3.0 | .0 | .0 | .00 | NA | |
| 3.5 | .0 | .0 | .00 | NA | |
| 4.0 | .0 | .0 | .00 | NA | |
| 4.5 | .0 | .0 | .00 | NA | |
| 5.0 | .0 | .0 | .00 | NA | |
| 5.5 | .0 | .0 | .00 | NA | |
| 6.0 | .0 | .0 | .00 | NA | |
| 6.5 | .0 | .0 | .00 | NA | |
| 7.0 | .0 | .0 | .00 | NA | |
| 7.5 | 49.8 | 68.9 | 1.78 | NA | SILTY SAND to SANDY SILT |
| 8.0 | 80.4 | 109.1 | 3.07 | NA | *CLAYEY SAND to SANDY CLAY |
| 8.5 | 64.9 | 86.3 | 4.62 | NA | *SANDY CLAY to SILTY CLAY |
| 9.0 | 54.5 | 71.2 | 4.24 | NA | *CLAYEY SAND to SANDY CLAY |
| 9.5 | 40.8 | 52.4 | 3.88 | NA | SANDY SILT to CLAYEY SILT |
| 10.0 | 30.8 | 38.7 | 2.89 | NA | SANDY SILT to CLAYEY SILT |
| 10.5 | 51.0 | 63.2 | 3.44 | NA | SANDY SILT to CLAYEY SILT |
| 11.0 | 48.0 | 58.5 | 5.69 | NA | *SANDY CLAY to SILTY CLAY |
| 11.5 | 53.0 | 63.6 | 4.72 | NA | *SANDY CLAY to SILTY CLAY |
| 12.0 | 66.1 | 78.0 | 4.09 | NA | *CLAYEY SAND to SANDY CLAY |
| 12.5 | 73.2 | 85.1 | 3.73 | NA | *CLAYEY SAND to SANDY CLAY |
| 13.0 | 113.0 | 129.5 | 1.60 | NA | SAND to SILTY SAND |
| 13.5 | 148.0 | 167.1 | 1.57 | NA | SAND to SILTY SAND |
| 14.0 | 136.8 | 152.4 | 1.51 | NA | SAND to SILTY SAND |
| 14.5 | 174.6 | 191.7 | 1.43 | NA | SAND to SILTY SAND |
| 15.0 | 214.2 | 232.1 | 1.35 | NA | SAND to SILTY SAND |
| 15.5 | 219.9 | 235.1 | .80 | NA | SAND to SILTY SAND |
| 16.0 | 236.2 | 249.3 | .86 | NA | SAND to SILTY SAND |
| 16.5 | 255.9 | 266.7 | .80 | NA | SAND to SILTY SAND |
| 17.0 | 288.5 | 296.9 | 1.17 | NA | SAND to SILTY SAND |
| 17.5 | 253.1 | 257.3 | .64 | NA | SANDY GRAVEL to SAND |
| 18.0 | 274.3 | 275.5 | 1.04 | NA | SAND to SILTY SAND |
| 18.5 | 360.8 | 358.0 | .74 | NA | SANDY GRAVEL to SAND |
| 19.0 | 373.5 | 366.4 | .81 | NA | SANDY GRAVEL to SAND |
| 19.5 | 417.4 | 404.7 | .78 | NA | SANDY GRAVEL to SAND |
| 20.0 | 472.3 | 452.8 | .80 | NA | SANDY GRAVEL to SAND |

NA = NOT APPLICABLE

TOP 7.0 FT IS DISTURBED SOIL

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002711

The Earth Technology
 Corporation

SOUNDING : CPT-7

PAGE 2 of 2

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------|
| 20.5 | 442.9 | 419.8 | .49 | NA | SANDY GRAVEL to SAND |

NA = NOT APPLICABLE

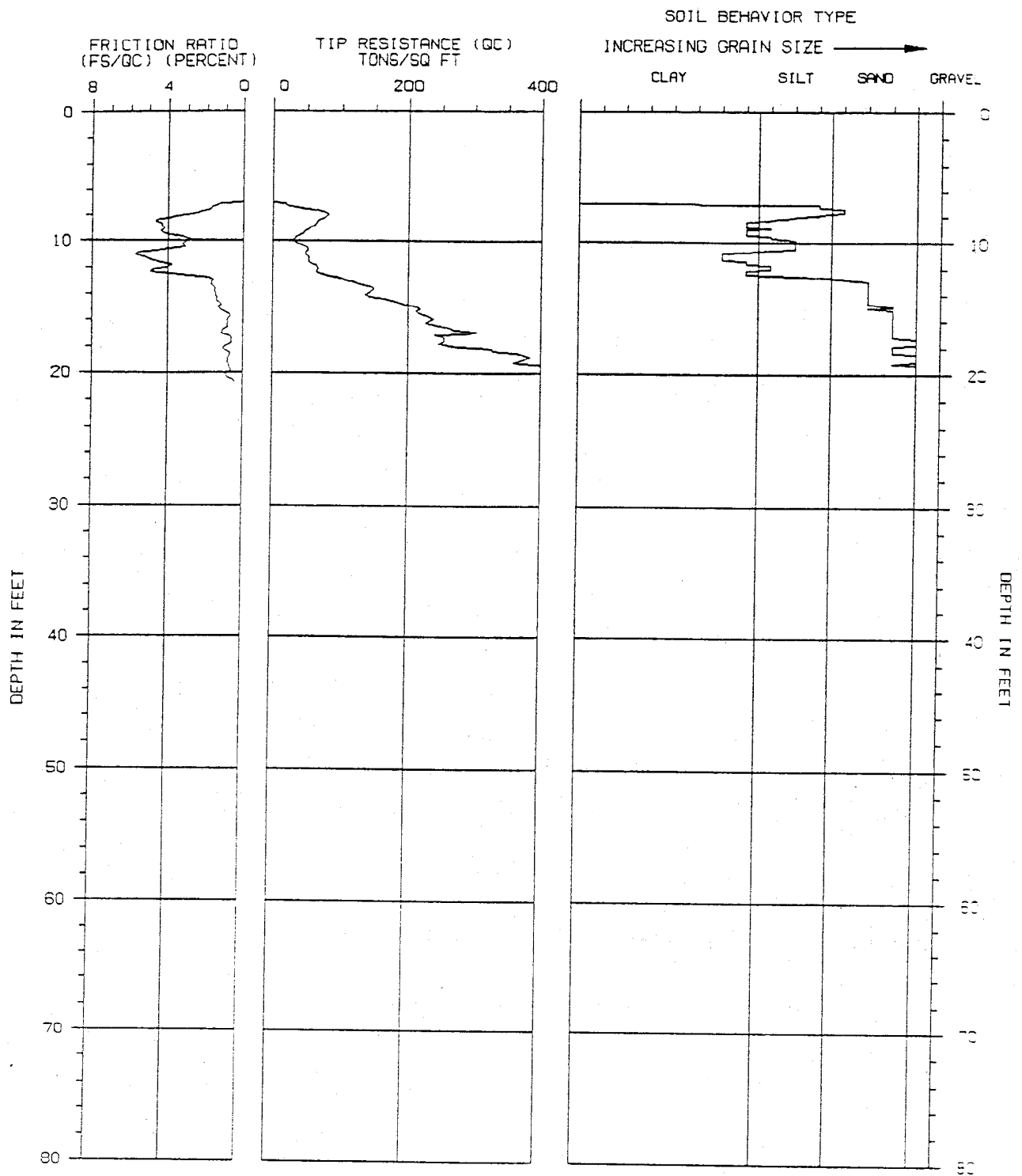
*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002712

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Corporation*



TOP 7.0 FT IS DISTURBED SOIL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

CONE PENETRATION TEST


SOUNDING NUMBER: CPT-7

PROJECT NAME : HLA/MC KESSON-11

LOCATION : SANTA FE SPRGS

PROJECT NUMBER : 92-380-09501

DATE : 09-10-1991

 THE EARTH TECHNOLOGY CORPORATION

MCK0002713

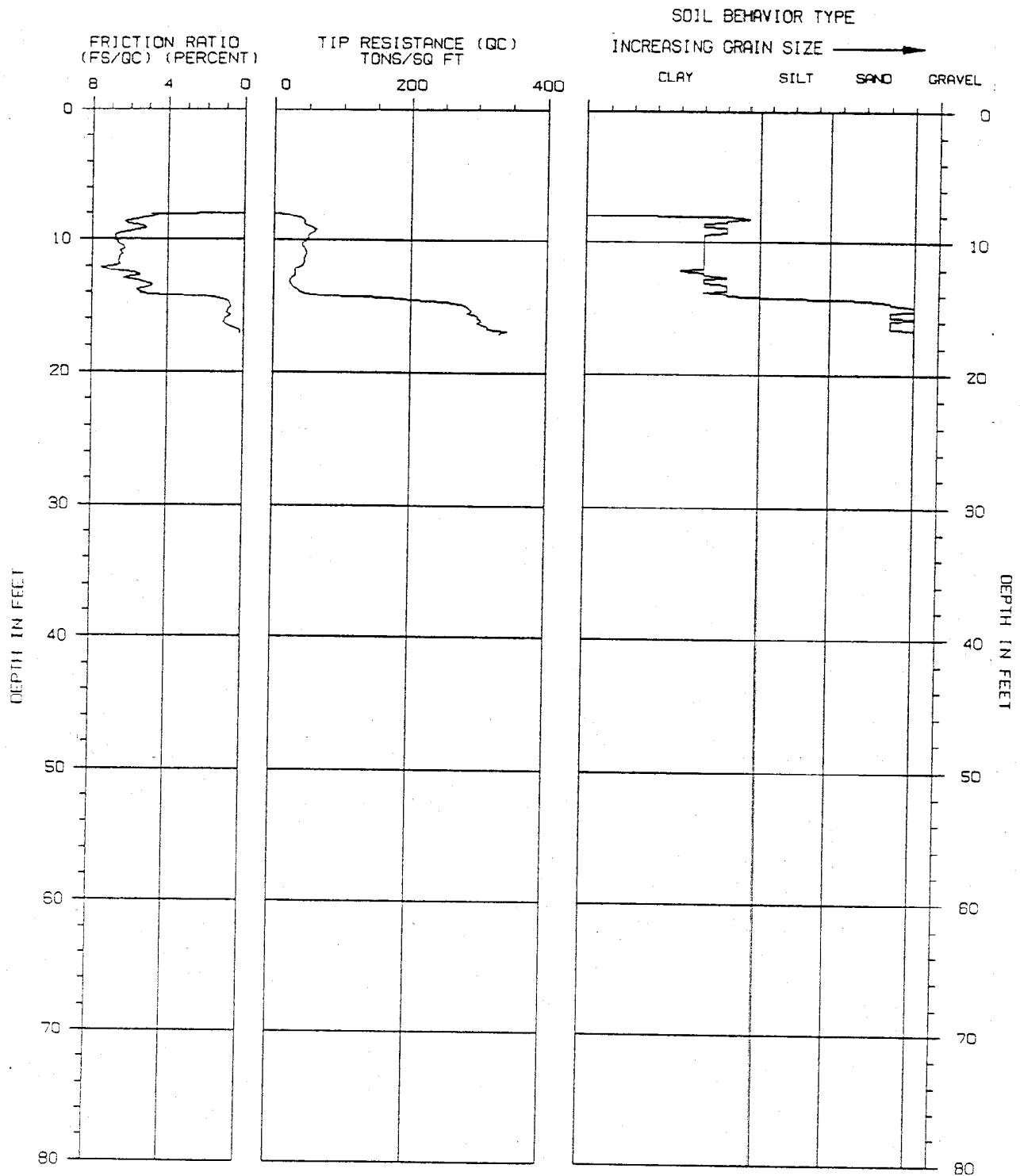
 *
 * **CONE PENETRATION TEST** *
 *
 * SOUNDING : CPT-8 PROJECT NO : 92-380-09501 *
 * PROJECT : HLA/MC KESSON-II INSTRUMENT : F15CKE091 *
 * LOCATION : SANTA FE SPRGS SYSTEM : T-2 *
 * DATE : 09-10-1991 OPERATOR : MS/AF *
 *

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|---------------------------|
| .0 | .0 | .0 | .00 | NA | |
| .5 | .0 | .0 | .00 | NA | |
| 1.0 | .0 | .0 | .00 | NA | |
| 1.5 | .0 | .0 | .00 | NA | |
| 2.0 | .0 | .0 | .00 | NA | |
| 2.5 | .0 | .0 | .00 | NA | |
| 3.0 | .0 | .0 | .00 | NA | |
| 3.5 | .0 | .0 | .00 | NA | |
| 4.0 | .0 | .0 | .00 | NA | |
| 4.5 | .0 | .0 | .00 | NA | |
| 5.0 | .0 | .0 | .00 | NA | |
| 5.5 | .0 | .0 | .00 | NA | |
| 6.0 | .0 | .0 | .00 | NA | |
| 6.5 | .0 | .0 | .00 | NA | |
| 7.0 | .0 | .0 | .00 | NA | |
| 7.5 | .0 | .0 | .00 | NA | |
| 8.0 | .0 | .0 | .00 | NA | |
| 8.5 | 44.1 | 58.6 | 5.61 | NA | *SANDY CLAY to SILTY CLAY |
| 9.0 | 51.1 | 66.7 | 5.29 | NA | *SANDY CLAY to SILTY CLAY |
| 9.5 | 54.2 | 69.4 | 6.40 | NA | *SANDY CLAY to SILTY CLAY |
| 10.0 | 47.4 | 59.8 | 6.84 | NA | *SANDY CLAY to SILTY CLAY |
| 10.5 | 41.2 | 51.1 | 6.37 | NA | *SANDY CLAY to SILTY CLAY |
| 11.0 | 46.8 | 57.0 | 6.40 | NA | *SANDY CLAY to SILTY CLAY |
| 11.5 | 43.7 | 52.4 | 6.56 | NA | *SANDY CLAY to SILTY CLAY |
| 12.0 | 38.2 | 45.1 | 6.95 | NA | *SANDY CLAY to SILTY CLAY |
| 12.5 | 30.7 | 35.7 | 5.74 | NA | *SANDY CLAY to SILTY CLAY |
| 13.0 | 22.6 | 25.9 | 6.09 | NA | *SANDY CLAY to SILTY CLAY |
| 13.5 | 27.8 | 31.3 | 4.84 | NA | *SANDY CLAY to SILTY CLAY |
| 14.0 | 42.1 | 46.9 | 5.25 | NA | CLAYEY SILT to SILTY CLAY |
| 14.5 | 201.6 | 221.4 | 1.17 | NA | *SANDY CLAY to SILTY CLAY |
| 15.0 | 283.1 | 306.7 | .70 | NA | SAND to SILTY SAND |
| 15.5 | 285.0 | 304.8 | .91 | NA | SANDY GRAVEL to SAND |
| 16.0 | 304.5 | 321.4 | 1.01 | NA | SAND to SILTY SAND |
| 16.5 | 313.4 | 326.6 | .85 | NA | SAND to SILTY SAND |
| 17.0 | 331.5 | 341.1 | .25 | NA | SANDY GRAVEL to SAND |

NA = NOT APPLICABLE
 TOP 8.0 FT IS DISTURBED SOIL
 *INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
 ASSUMED TOTAL UNIT WT = 110 PCF
 ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002714

The Earth Technology
 Corporation



CONE PENETRATION TEST


SOUNDING NUMBER: CPT-8

PROJECT NAME : HLA/MC KESSON-II

LOCATION : SANTA FE SPRGS

PROJECT NUMBER : 92-380-09501

DATE : 09-10-1991

 THE EARTH TECHNOLOGY CORPORATION

MCK0002715

 *
 * **CONE PENETRATION TEST** *
 *
 * SOUNDING : CPT-9 PROJECT NO : 92-380-09501 *
 * PROJECT : HLA/MC KESSON-II INSTRUMENT : F15CKE091 *
 * LOCATION : SANTA FE SPRGS SYSTEM : T-2 *
 * DATE : 09-10-1991 OPERATOR : MS/AF *
 *

PAGE 1 of 2

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|---------------------------|
| 0.0 | 0.0 | 0.0 | 0.00 | NA | |
| 0.5 | 0.0 | 0.0 | 0.00 | NA | |
| 1.0 | 0.0 | 0.0 | 0.00 | NA | |
| 1.5 | 0.0 | 0.0 | 0.00 | NA | |
| 2.0 | 0.0 | 0.0 | 0.00 | NA | |
| 2.5 | 0.0 | 0.0 | 0.00 | NA | |
| 3.0 | 0.0 | 0.0 | 0.00 | NA | |
| 3.5 | 0.0 | 0.0 | 0.00 | NA | |
| 4.0 | 0.0 | 0.0 | 0.00 | NA | |
| 4.5 | 0.0 | 0.0 | 0.00 | NA | |
| 5.0 | 0.0 | 0.0 | 0.00 | NA | |
| 5.5 | 0.0 | 0.0 | 0.00 | NA | |
| 6.0 | 0.0 | 0.0 | 0.00 | NA | |
| 6.5 | 0.0 | 0.0 | 0.00 | NA | |
| 7.0 | 0.0 | 0.0 | 0.00 | NA | |
| 7.5 | 0.0 | 0.0 | 0.00 | NA | |
| 8.0 | 0.0 | 0.0 | 0.00 | NA | |
| 8.5 | 11.3 | 15.0 | 1.39 | NA | SILTY SAND to SANDY SILT |
| 9.0 | 38.1 | 49.7 | 1.19 | NA | SILTY SAND to SANDY SILT |
| 9.5 | 33.8 | 43.3 | 1.42 | NA | SILTY SAND to SANDY SILT |
| 10.0 | 27.3 | 34.4 | 2.53 | NA | SANDY SILT to CLAYEY SILT |
| 10.5 | 24.0 | 29.7 | 2.85 | NA | SANDY SILT to CLAYEY SILT |
| 11.0 | 47.1 | 57.3 | 1.30 | NA | SILTY SAND to SANDY SILT |
| 11.5 | 68.1 | 81.6 | 1.70 | NA | SILTY SAND to SANDY SILT |
| 12.0 | 70.4 | 83.1 | 1.28 | NA | SAND to SILTY SAND |
| 12.5 | 82.0 | 95.3 | 1.17 | NA | SAND to SILTY SAND |
| 13.0 | 135.9 | 155.7 | 1.00 | NA | SAND to SILTY SAND |
| 13.5 | 210.9 | 238.2 | .82 | NA | SAND to SILTY SAND |
| 14.0 | 224.0 | 249.4 | 1.02 | NA | SAND to SILTY SAND |
| 14.5 | 200.1 | 219.8 | 1.08 | NA | SAND to SILTY SAND |
| 15.0 | 166.0 | 179.9 | 1.01 | NA | SAND to SILTY SAND |
| 15.5 | 196.5 | 210.1 | 1.19 | NA | SAND to SILTY SAND |
| 16.0 | 220.4 | 232.7 | 1.02 | NA | SAND to SILTY SAND |
| 16.5 | 219.1 | 228.3 | .95 | NA | SAND to SILTY SAND |
| 17.0 | 227.4 | 234.0 | .76 | NA | SAND to SILTY SAND |
| 17.5 | 369.0 | 375.1 | 1.07 | NA | SAND to SILTY SAND |
| 18.0 | 375.9 | 377.6 | .96 | NA | SAND to SILTY SAND |
| 18.5 | 331.4 | 328.9 | 1.00 | NA | SAND to SILTY SAND |
| 19.0 | 344.8 | 338.2 | .76 | NA | SANDY GRAVEL to SAND |
| 19.5 | 380.1 | 368.5 | .96 | NA | SAND to SILTY SAND |
| 20.0 | 391.0 | 374.8 | .90 | NA | SAND to SILTY SAND |

NA = NOT APPLICABLE

TOP 8.0 FT IS DISTURBED SOIL

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002716

| DEPTH | TIP RESISTANCE | NORMALIZED | FRICTION | CONE PORE | SOIL BEHAVIOR TYPE |
|-------|----------------|----------------|----------|-----------|----------------------|
| (ft) | (tsf) | TIP RESISTANCE | RATIO | PRESSURE | |
| | | (tsf) | (%) | (tsf) | |
| 20.5 | 437.2 | 414.4 | .71 | NA | SANDY GRAVEL to SAND |
| 21.0 | 422.8 | 396.3 | .92 | NA | SAND to SILTY SAND |
| 21.5 | 410.3 | 380.4 | .97 | NA | SAND to SILTY SAND |
| 22.0 | 436.4 | 400.3 | .86 | NA | SANDY GRAVEL to SAND |

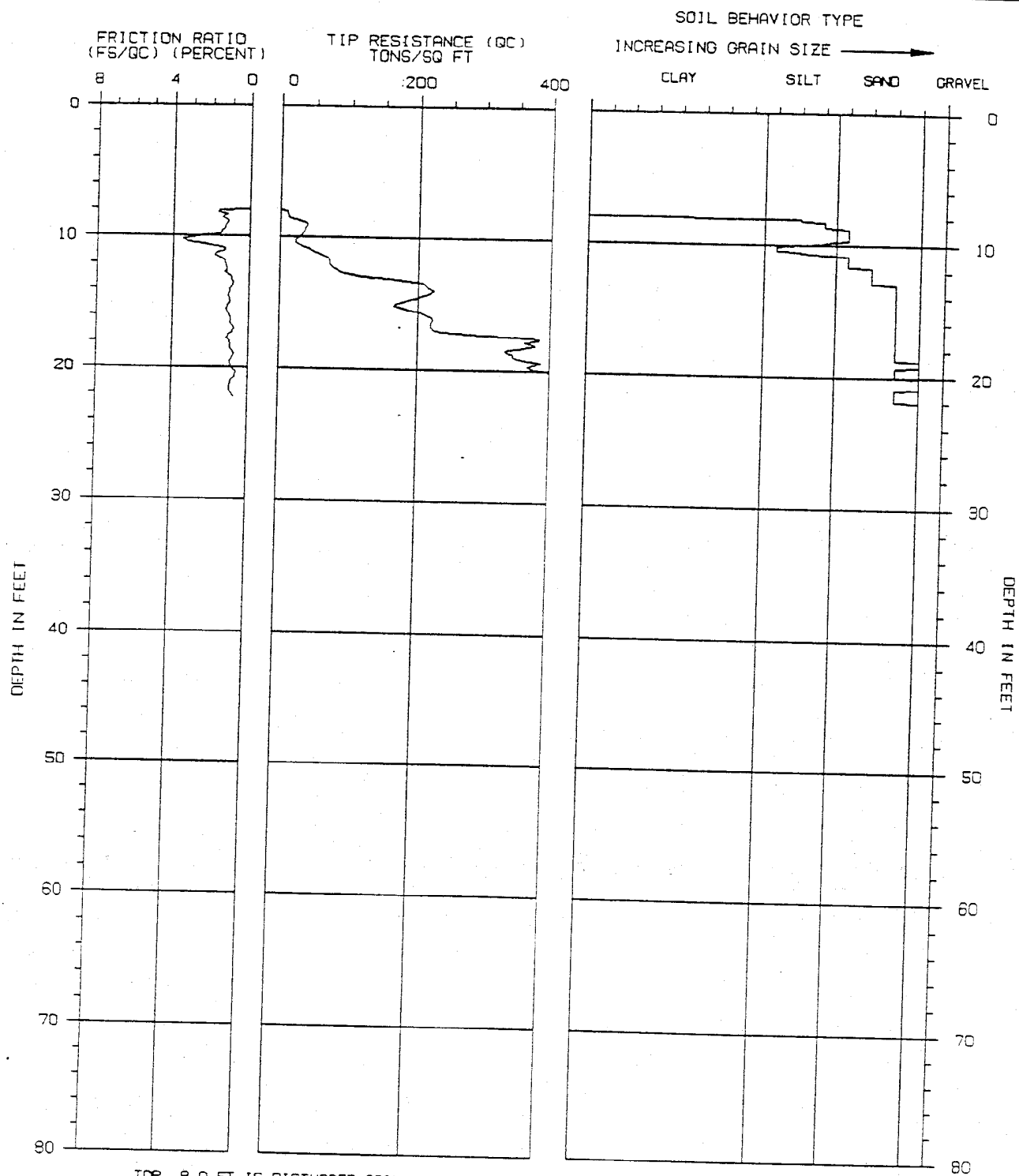
NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002717



TOP 8.0 FT IS DISTURBED SOIL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

CONE PENETRATION TEST


SOUNDING NUMBER: CPT-9

PROJECT NAME : HLA/MC KESSON-11

LOCATION : SANTA FE SPRGS

PROJECT NUMBER : 92-380-09501

DATE : 09-10-1991

 THE EARTH TECHNOLOGY CORPORATION

MCK0002718

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*
*   SOUNDING   : CPT-10
*   PROJECT    : HLA/MC KESSON-II
*   LOCATION   : SANTA FE SPRGS
*   DATE       : 09-10-1991
*
*   PROJECT NO : 92-380-09501
*   INSTRUMENT  : F15CKE091
*   SYSTEM      : T-2
*   OPERATOR    : MS/AF
*
*****

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| DEPTH | TIP RESISTANCE | NORMALIZED | FRICTION | CONE PORE | SOIL BEHAVIOR TYPE |
|-------|----------------|-------------------------|--------------|-------------------|----------------------------|
| (ft) | (tsf) | TIP RESISTANCE
(tsf) | RATIO
(%) | PRESSURE
(tsf) | |
| .0 | .0 | .0 | .00 | NA | |
| .5 | .0 | .0 | .00 | NA | |
| 1.0 | .0 | .0 | .00 | NA | |
| 1.5 | .0 | .0 | .00 | NA | |
| 2.0 | 35.4 | 69.4 | 3.24 | NA | SANDY SILT to CLAYEY SILT |
| 2.5 | 17.9 | 33.4 | .96 | NA | SILTY SAND to SANDY SILT |
| 3.0 | 30.0 | 53.5 | 2.27 | NA | SILTY SAND to SANDY SILT |
| 3.5 | 57.8 | 99.2 | 3.74 | NA | *CLAYEY SAND to SANDY CLAY |
| 4.0 | 45.0 | 74.6 | 3.79 | NA | *CLAYEY SAND to SANDY CLAY |
| 4.5 | 70.4 | 113.0 | 1.48 | NA | SAND to SILTY SAND |
| 5.0 | 119.9 | 187.2 | 2.52 | NA | *SILTY SAND to CLAYEY SAND |
| 5.5 | 90.9 | 138.1 | 5.53 | NA | *SANDY CLAY to SILTY CLAY |
| 6.0 | 91.4 | 135.4 | 6.22 | NA | *SANDY CLAY to SILTY CLAY |
| 6.5 | 98.1 | 141.9 | 4.98 | NA | *SANDY CLAY to SILTY CLAY |
| 7.0 | 99.9 | 141.4 | 3.66 | NA | *CLAYEY SAND to SANDY CLAY |
| 7.5 | 163.9 | 227.0 | 1.40 | NA | SAND to SILTY SAND |
| 8.0 | 174.4 | 236.6 | 1.33 | NA | SAND to SILTY SAND |
| 8.5 | 168.7 | 224.4 | 1.20 | NA | SAND to SILTY SAND |
| 9.0 | 151.0 | 197.1 | 1.16 | NA | SAND to SILTY SAND |
| 9.5 | 145.4 | 186.4 | 1.10 | NA | SAND to SILTY SAND |
| 10.0 | 162.9 | 205.3 | .92 | NA | SAND to SILTY SAND |
| 10.5 | 169.8 | 210.3 | .70 | NA | SAND to SILTY SAND |
| 11.0 | 195.5 | 238.2 | .71 | NA | SAND to SILTY SAND |
| 11.5 | 206.5 | 247.6 | .80 | NA | SAND to SILTY SAND |
| 12.0 | 210.0 | 247.8 | .87 | NA | SAND to SILTY SAND |
| 12.5 | 225.7 | 262.4 | .99 | NA | SAND to SILTY SAND |
| 13.0 | 244.3 | 279.9 | 1.07 | NA | SAND to SILTY SAND |
| 13.5 | 282.3 | 318.8 | .89 | NA | SAND to SILTY SAND |
| 14.0 | 291.7 | 324.8 | .87 | NA | SAND to SILTY SAND |
| 14.5 | 288.9 | 317.3 | 1.00 | NA | SAND to SILTY SAND |
| 15.0 | 308.4 | 334.2 | 1.20 | NA | SAND to SILTY SAND |
| 15.5 | 309.5 | 330.9 | 1.61 | NA | SAND to SILTY SAND |
| 16.0 | 293.9 | 310.2 | 1.86 | NA | *SAND to SILTY SAND |
| 16.5 | 345.9 | 360.5 | 1.41 | NA | SAND to SILTY SAND |
| 17.0 | 354.3 | 364.7 | 1.40 | NA | SAND to SILTY SAND |
| 17.5 | 319.8 | 325.1 | 2.07 | NA | *SAND to SILTY SAND |
| 18.0 | 323.1 | 324.5 | 1.82 | NA | *SAND to SILTY SAND |
| 18.5 | 365.0 | 362.2 | 1.81 | NA | *SAND to SILTY SAND |
| 19.0 | 342.8 | 336.3 | 2.20 | NA | *SAND to SILTY SAND |
| 19.5 | 337.3 | 327.1 | 1.76 | NA | SAND to SILTY SAND |
| 20.0 | 292.9 | 280.7 | 1.59 | NA | SAND to SILTY SAND |

The Earth Technology Corporation

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| 20.5 | 118.4 | 112.2 | 3.32 | NA | *CLAYEY SAND to SANDY CLAY |
| 21.0 | 92.0 | 86.3 | 3.09 | NA | SANDY SILT to CLAYEY SILT |
| 21.5 | 72.7 | 67.4 | 2.57 | NA | SILTY SAND to SANDY SILT |
| 22.0 | 64.9 | 59.5 | 2.29 | NA | SILTY SAND to SANDY SILT |
| 22.5 | 54.3 | 49.3 | 2.45 | NA | SILTY SAND to SANDY SILT |
| 23.0 | 45.5 | 40.8 | 2.17 | NA | SILTY SAND to SANDY SILT |
| 23.5 | 75.5 | 67.1 | 2.86 | NA | SANDY SILT to CLAYEY SILT |
| 24.0 | 70.0 | 61.5 | 2.88 | NA | SANDY SILT to CLAYEY SILT |
| 24.5 | 84.4 | 73.5 | 2.89 | NA | SANDY SILT to CLAYEY SILT |
| 25.0 | 67.7 | 58.3 | 3.27 | NA | SANDY SILT to CLAYEY SILT |
| 25.5 | 49.3 | 42.1 | 3.13 | NA | SANDY SILT to CLAYEY SILT |
| 26.0 | 46.2 | 39.1 | 2.53 | NA | SANDY SILT to CLAYEY SILT |
| 26.5 | 46.3 | 38.8 | 2.57 | NA | SANDY SILT to CLAYEY SILT |
| 27.0 | 39.3 | 32.5 | 3.16 | NA | SANDY SILT to CLAYEY SILT |
| 27.5 | 35.6 | 29.2 | 2.55 | NA | SANDY SILT to CLAYEY SILT |
| 28.0 | 45.2 | 36.8 | 3.15 | NA | SANDY SILT to CLAYEY SILT |
| 28.5 | 36.7 | 29.5 | 3.41 | NA | SANDY SILT to CLAYEY SILT |
| 29.0 | 48.0 | 38.3 | 3.45 | NA | SANDY SILT to CLAYEY SILT |
| 29.5 | 67.9 | 53.6 | 3.14 | NA | SANDY SILT to CLAYEY SILT |
| 30.0 | 60.7 | 47.5 | 4.20 | NA | *SANDY CLAY to SILTY CLAY |
| 30.5 | 64.6 | 50.1 | 4.81 | NA | *SANDY CLAY to SILTY CLAY |
| 31.0 | 70.7 | 54.3 | 4.37 | NA | *SANDY CLAY to SILTY CLAY |
| 31.5 | 67.3 | 51.3 | 4.29 | NA | *SANDY CLAY to SILTY CLAY |
| 32.0 | 69.9 | 52.7 | 4.43 | NA | *SANDY CLAY to SILTY CLAY |
| 32.5 | 68.1 | 50.9 | 4.46 | NA | *SANDY CLAY to SILTY CLAY |
| 33.0 | 73.4 | 54.4 | 4.09 | NA | *CLAYEY SAND to SANDY CLAY |
| 33.5 | 58.8 | 43.2 | 4.59 | NA | *SANDY CLAY to SILTY CLAY |
| 34.0 | 59.7 | 43.4 | 4.52 | NA | *SANDY CLAY to SILTY CLAY |
| 34.5 | 51.5 | 37.2 | 4.54 | NA | *SANDY CLAY to SILTY CLAY |
| 35.0 | 48.9 | 35.0 | 3.96 | NA | CLAYEY SILT to SILTY CLAY |
| 35.5 | 51.5 | 36.5 | 3.36 | NA | SANDY SILT to CLAYEY SILT |
| 36.0 | 46.6 | 32.8 | 4.39 | NA | CLAYEY SILT to SILTY CLAY |
| 36.5 | 37.2 | 25.9 | 3.82 | NA | CLAYEY SILT to SILTY CLAY |
| 37.0 | 31.9 | 22.0 | 3.63 | NA | CLAYEY SILT to SILTY CLAY |
| 37.5 | 30.3 | 20.7 | 3.21 | NA | SANDY SILT to CLAYEY SILT |
| 38.0 | 47.2 | 32.1 | 4.72 | NA | CLAYEY SILT to SILTY CLAY |
| 38.5 | 42.9 | 28.9 | 3.31 | NA | SANDY SILT to CLAYEY SILT |
| 39.0 | 37.7 | 25.2 | 3.90 | NA | CLAYEY SILT to SILTY CLAY |
| 39.5 | 32.2 | 21.3 | 3.46 | NA | CLAYEY SILT to SILTY CLAY |
| 40.0 | 59.2 | 38.9 | 3.65 | NA | SANDY SILT to CLAYEY SILT |
| 40.5 | 175.3 | 114.3 | 2.35 | NA | SILTY SAND to SANDY SILT |
| 41.0 | 295.2 | 190.9 | 2.00 | NA | SILTY SAND to SANDY SILT |
| 41.5 | 300.2 | 192.6 | 2.33 | NA | *SILTY SAND to CLAYEY SAND |
| 42.0 | 348.6 | 221.8 | 2.43 | NA | *SILTY SAND to CLAYEY SAND |
| 42.5 | 323.4 | 204.2 | 2.59 | NA | *SILTY SAND to CLAYEY SAND |
| 43.0 | 348.2 | 218.0 | 2.46 | NA | *SILTY SAND to CLAYEY SAND |
| 43.5 | 346.1 | 215.0 | 2.76 | NA | *SILTY SAND to CLAYEY SAND |
| 44.0 | 340.5 | 209.8 | 2.96 | NA | *SILTY SAND to CLAYEY SAND |
| 44.5 | 379.1 | 231.7 | 2.67 | NA | *SILTY SAND to CLAYEY SAND |
| 45.0 | 409.6 | 248.4 | 2.26 | NA | *SILTY SAND to CLAYEY SAND |

NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002720

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| 45.5 | 384.8 | 231.5 | 2.42 | NA | *SILTY SAND to CLAYEY SAND |
| 46.0 | 388.8 | 232.1 | 2.05 | NA | SAND to SILTY SAND |
| 46.5 | 404.0 | 239.2 | 1.97 | NA | SAND to SILTY SAND |
| 47.0 | 351.0 | 206.2 | 2.08 | NA | SILTY SAND to SANDY SILT |
| 47.5 | 176.0 | 102.6 | 2.69 | NA | SILTY SAND to SANDY SILT |
| 48.0 | 120.9 | 70.0 | 3.96 | NA | *CLAYEY SAND to SANDY CLAY |
| 48.5 | 118.6 | 68.3 | 3.46 | NA | SANDY SILT to CLAYEY SILT |
| 49.0 | 128.8 | 74.0 | 3.80 | NA | *CLAYEY SAND to SANDY CLAY |
| 49.5 | 206.2 | 118.0 | 2.43 | NA | SILTY SAND to SANDY SILT |
| 50.0 | 210.6 | 120.2 | 2.72 | NA | SILTY SAND to SANDY SILT |
| 50.5 | 232.7 | 132.4 | 2.27 | NA | SILTY SAND to SANDY SILT |
| 51.0 | 319.6 | 181.1 | .87 | NA | SAND to SILTY SAND |
| 51.5 | 425.8 | 240.5 | .72 | NA | SAND to SILTY SAND |
| 52.0 | 297.3 | 167.4 | 1.69 | NA | SAND to SILTY SAND |
| 52.5 | 278.9 | 156.5 | 1.43 | NA | SAND to SILTY SAND |
| 53.0 | 348.5 | 194.9 | .53 | NA | SAND to SILTY SAND |
| 53.5 | 436.1 | 243.1 | .50 | NA | SANDY GRAVEL to SAND |
| 54.0 | 458.5 | 254.7 | .39 | NA | SANDY GRAVEL to SAND |
| 54.5 | 496.3 | 274.8 | .41 | NA | SANDY GRAVEL to SAND |
| 55.0 | 472.6 | 260.8 | .59 | NA | SANDY GRAVEL to SAND |
| 55.5 | 411.2 | 226.1 | .62 | NA | SAND to SILTY SAND |
| 56.0 | 349.3 | 191.5 | .63 | NA | SAND to SILTY SAND |
| 56.5 | 151.7 | 82.9 | 2.78 | NA | SILTY SAND to SANDY SILT |
| 57.0 | 104.4 | 56.8 | 5.24 | NA | *SANDY CLAY to SILTY CLAY |
| 57.5 | 148.1 | 80.4 | 5.32 | NA | *SANDY CLAY to SILTY CLAY |
| 58.0 | 267.8 | 144.8 | 2.36 | NA | SILTY SAND to SANDY SILT |
| 58.5 | 260.2 | 140.3 | 2.03 | NA | SILTY SAND to SANDY SILT |
| 59.0 | 292.1 | 157.0 | 2.20 | NA | SILTY SAND to SANDY SILT |
| 59.5 | 367.4 | 196.8 | 1.64 | NA | SAND to SILTY SAND |
| 60.0 | 466.7 | 249.1 | 1.30 | NA | SAND to SILTY SAND |

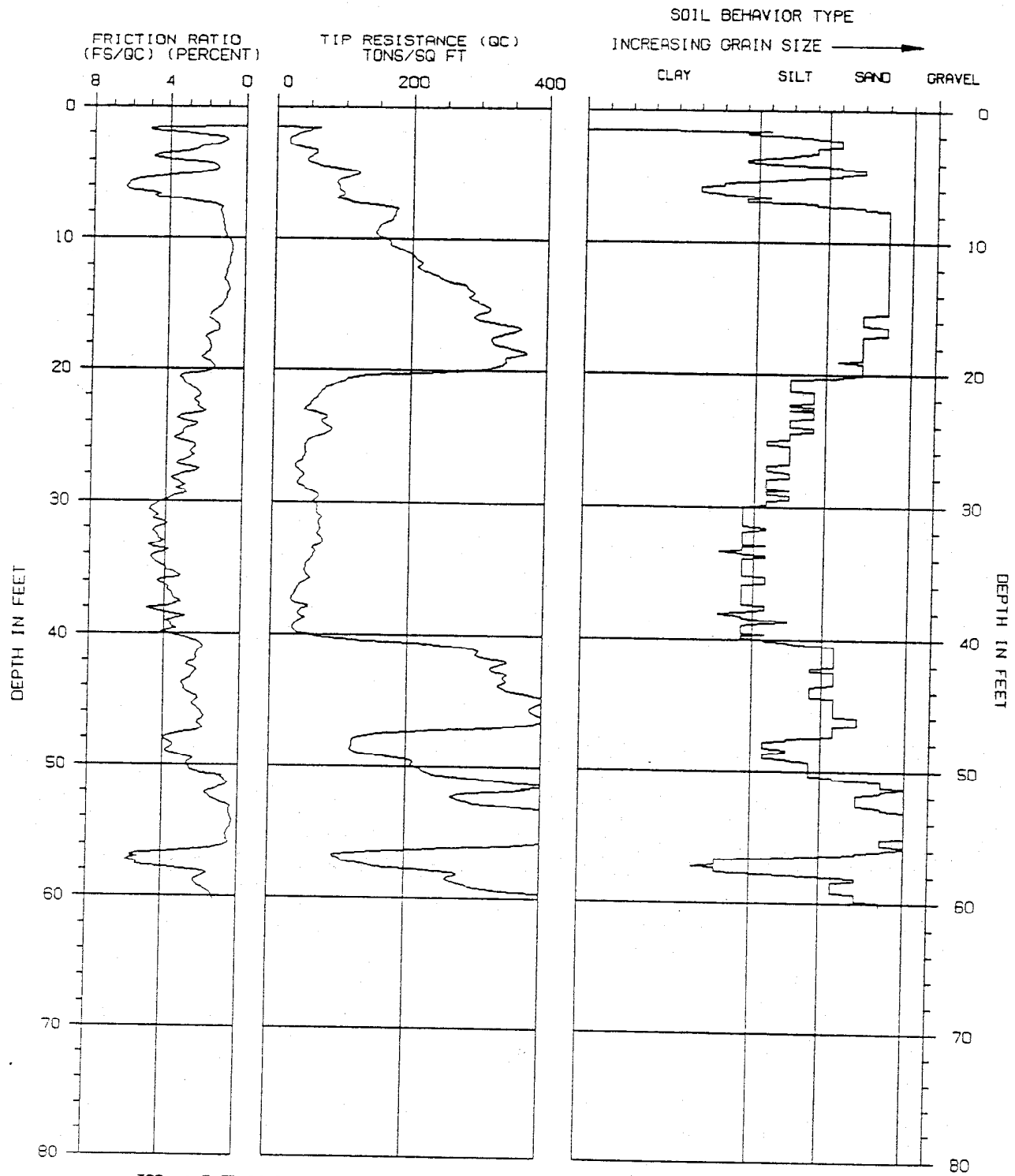
NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002721



TOP 1.5 FT IS DISTURBED SOIL

MCK0002722

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-10

PROJECT NAME : HLA/MC KESSON-11

LOCATION : SANTA FE SPRGS

PROJECT NUMBER : 92-380-09501

DATE : 09-10-1991

THE EARTH TECHNOLOGY CORPORATION


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*   SOUNDING   : CPT-11
*   PROJECT    : HLA/MCKESSON-II
*   LOCATION   : SANTA FE SPRGS
*   DATE       : 09-10-1991
*
*   PROJECT NO : 92-380-09501
*   INSTRUMENT  : F15CKE091
*   SYSTEM      : T-2
*   OPERATOR    : EC/AF
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| DEPTH | TIP RESISTANCE | NORMALIZED | FRICTION | CONE PORE | SOIL BEHAVIOR TYPE |
|-------|----------------|-------------------------|--------------|-------------------|----------------------------|
| (ft) | (tsf) | TIP RESISTANCE
(tsf) | RATIO
(%) | PRESSURE
(tsf) | |
| .0 | .0 | .0 | .00 | NA | |
| .5 | 115.2 | 295.1 | 1.52 | NA | SAND to SILTY SAND |
| 1.0 | 115.7 | 261.4 | 2.97 | NA | *SILTY SAND to CLAYEY SAND |
| 1.5 | 87.0 | 181.3 | 2.78 | NA | *SILTY SAND to CLAYEY SAND |
| 2.0 | 83.1 | 162.8 | 4.63 | NA | *CLAYEY SAND to SANDY CLAY |
| 2.5 | 70.5 | 131.2 | 4.88 | NA | *SANDY CLAY to SILTY CLAY |
| 3.0 | 68.6 | 122.3 | 3.05 | NA | *SILTY SAND to CLAYEY SAND |
| 3.5 | 101.9 | 174.8 | 1.51 | NA | SAND to SILTY SAND |
| 4.0 | 109.5 | 181.5 | 1.83 | NA | SAND to SILTY SAND |
| 4.5 | 93.7 | 150.6 | 1.87 | NA | SILTY SAND to SANDY SILT |
| 5.0 | 99.1 | 154.6 | 1.96 | NA | SILTY SAND to SANDY SILT |
| 5.5 | 97.9 | 148.7 | 4.62 | NA | *CLAYEY SAND to SANDY CLAY |
| 6.0 | 84.3 | 124.9 | 6.01 | NA | *SANDY CLAY to SILTY CLAY |
| 6.5 | 70.7 | 102.3 | 6.20 | NA | *SANDY CLAY to SILTY CLAY |
| 7.0 | 64.0 | 90.5 | 6.98 | NA | *SANDY CLAY to SILTY CLAY |
| 7.5 | 46.8 | 64.7 | 7.23 | NA | *SANDY CLAY to SILTY CLAY |
| 8.0 | 44.3 | 60.1 | 8.00 | NA | *SANDY CLAY to SILTY CLAY |
| 8.5 | 51.6 | 68.6 | 7.13 | NA | *SANDY CLAY to SILTY CLAY |
| 9.0 | 67.4 | 88.0 | 6.25 | NA | *SANDY CLAY to SILTY CLAY |
| 9.5 | 77.8 | 99.7 | 5.84 | NA | *SANDY CLAY to SILTY CLAY |
| 10.0 | 94.4 | 119.0 | 3.86 | NA | *CLAYEY SAND to SANDY CLAY |
| 10.5 | 93.0 | 115.2 | 2.59 | NA | SILTY SAND to SANDY SILT |
| 11.0 | 95.2 | 116.0 | 2.86 | NA | *SILTY SAND to CLAYEY SAND |
| 11.5 | 74.3 | 89.1 | 3.94 | NA | *CLAYEY SAND to SANDY CLAY |
| 12.0 | 76.9 | 90.8 | 1.56 | NA | SILTY SAND to SANDY SILT |
| 12.5 | 75.0 | 87.2 | 1.45 | NA | SAND to SILTY SAND |
| 13.0 | 75.6 | 86.6 | 1.30 | NA | SAND to SILTY SAND |
| 13.5 | 76.3 | 86.2 | 1.13 | NA | SAND to SILTY SAND |
| 14.0 | 67.3 | 74.9 | 1.36 | NA | SAND to SILTY SAND |
| 14.5 | 69.6 | 76.4 | 1.15 | NA | SAND to SILTY SAND |
| 15.0 | 100.6 | 109.0 | .94 | NA | SAND to SILTY SAND |
| 15.5 | 95.3 | 101.9 | 1.14 | NA | SAND to SILTY SAND |
| 16.0 | 87.1 | 91.9 | 1.34 | NA | SAND to SILTY SAND |
| 16.5 | 109.0 | 113.6 | 1.07 | NA | SAND to SILTY SAND |
| 17.0 | 135.4 | 139.3 | 1.11 | NA | SAND to SILTY SAND |
| 17.5 | 156.8 | 159.4 | 1.12 | NA | SAND to SILTY SAND |
| 18.0 | 201.3 | 202.2 | 1.10 | NA | SAND to SILTY SAND |
| 18.5 | 213.9 | 212.3 | 1.39 | NA | SAND to SILTY SAND |
| 19.0 | 244.0 | 239.4 | 1.25 | NA | SAND to SILTY SAND |
| 19.5 | 298.0 | 288.9 | 1.18 | NA | SAND to SILTY SAND |
| 20.0 | 278.2 | 266.6 | 1.34 | NA | SAND to SILTY SAND |

NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002723

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| 20.5 | 304.5 | 288.7 | 1.38 | NA | SAND to SILTY SAND |
| 21.0 | 327.2 | 306.7 | 1.63 | NA | SAND to SILTY SAND |
| 21.5 | 351.6 | 326.0 | 1.66 | NA | SAND to SILTY SAND |
| 22.0 | 341.1 | 312.9 | 2.09 | NA | *SAND to SILTY SAND |
| 22.5 | 339.0 | 307.6 | 1.68 | NA | SAND to SILTY SAND |
| 23.0 | 276.3 | 248.1 | 1.80 | NA | SAND to SILTY SAND |
| 23.5 | 153.9 | 136.8 | 2.15 | NA | SILTY SAND to SANDY SILT |
| 24.0 | 58.4 | 51.4 | 2.66 | NA | SANDY SILT to CLAYEY SILT |
| 24.5 | 61.5 | 53.5 | 3.03 | NA | SANDY SILT to CLAYEY SILT |
| 25.0 | 81.4 | 70.2 | 3.54 | NA | *CLAYEY SAND to SANDY CLAY |
| 25.5 | 65.9 | 56.2 | 3.39 | NA | SANDY SILT to CLAYEY SILT |
| 26.0 | 58.5 | 49.4 | 3.74 | NA | SANDY SILT to CLAYEY SILT |
| 26.5 | 64.1 | 53.6 | 4.81 | NA | *SANDY CLAY to SILTY CLAY |
| 27.0 | 69.9 | 57.9 | 3.58 | NA | SANDY SILT to CLAYEY SILT |
| 27.5 | 72.3 | 59.3 | 4.97 | NA | *SANDY CLAY to SILTY CLAY |
| 28.0 | 67.7 | 55.0 | 4.72 | NA | *SANDY CLAY to SILTY CLAY |
| 28.5 | 49.2 | 39.6 | 4.58 | NA | *SANDY CLAY to SILTY CLAY |
| 29.0 | 42.6 | 34.0 | 3.92 | NA | CLAYEY SILT to SILTY CLAY |
| 29.5 | 39.4 | 31.1 | 3.63 | NA | SANDY SILT to CLAYEY SILT |
| 30.0 | 36.8 | 28.8 | 3.67 | NA | SANDY SILT to CLAYEY SILT |
| 30.5 | 33.6 | 26.0 | 3.87 | NA | CLAYEY SILT to SILTY CLAY |
| 31.0 | 30.7 | 23.6 | 4.10 | NA | CLAYEY SILT to SILTY CLAY |
| 31.5 | 28.9 | 22.0 | 3.74 | NA | CLAYEY SILT to SILTY CLAY |
| 32.0 | 34.1 | 25.7 | 3.04 | NA | SANDY SILT to CLAYEY SILT |
| 32.5 | 53.7 | 40.1 | 3.90 | NA | SANDY SILT to CLAYEY SILT |
| 33.0 | 57.2 | 42.4 | 4.71 | NA | *SANDY CLAY to SILTY CLAY |
| 33.5 | 76.2 | 56.0 | 5.29 | NA | *SANDY CLAY to SILTY CLAY |
| 34.0 | 78.5 | 57.2 | 6.21 | NA | *SANDY CLAY to SILTY CLAY |
| 34.5 | 63.1 | 45.6 | 5.52 | NA | *SANDY CLAY to SILTY CLAY |
| 35.0 | 65.2 | 46.6 | 4.20 | NA | *SANDY CLAY to SILTY CLAY |
| 35.5 | 57.1 | 40.5 | 5.91 | NA | *SANDY CLAY to SILTY CLAY |
| 36.0 | 39.6 | 27.8 | 4.59 | NA | CLAYEY SILT to SILTY CLAY |
| 36.5 | 37.0 | 25.8 | 4.21 | NA | CLAYEY SILT to SILTY CLAY |
| 37.0 | 50.7 | 35.1 | 4.18 | NA | CLAYEY SILT to SILTY CLAY |
| 37.5 | 48.4 | 33.2 | 5.18 | NA | *SANDY CLAY to SILTY CLAY |
| 38.0 | 47.2 | 32.1 | 4.88 | NA | *SANDY CLAY to SILTY CLAY |
| 38.5 | 45.5 | 30.7 | 5.02 | NA | *SANDY CLAY to SILTY CLAY |
| 39.0 | 78.6 | 52.5 | 4.58 | NA | *SANDY CLAY to SILTY CLAY |
| 39.5 | 90.7 | 60.1 | 4.76 | NA | *SANDY CLAY to SILTY CLAY |
| 40.0 | 260.1 | 171.1 | 2.27 | NA | SILTY SAND to SANDY SILT |
| 40.5 | 237.3 | 154.7 | 4.51 | NA | *CLAYEY SAND to SANDY CLAY |
| 41.0 | 192.9 | 124.3 | 3.96 | NA | *CLAYEY SAND to SANDY CLAY |
| 41.5 | 137.9 | 88.5 | 3.93 | NA | *CLAYEY SAND to SANDY CLAY |
| 42.0 | 263.0 | 167.1 | 2.26 | NA | SILTY SAND to SANDY SILT |
| 42.5 | 318.8 | 201.3 | 2.40 | NA | *SILTY SAND to CLAYEY SAND |
| 43.0 | 354.7 | 222.1 | 1.99 | NA | SAND to SILTY SAND |
| 43.5 | 360.9 | 224.2 | 1.94 | NA | SAND to SILTY SAND |
| 44.0 | 392.2 | 241.7 | 1.73 | NA | SAND to SILTY SAND |
| 44.5 | 279.5 | 170.8 | 1.91 | NA | SAND to SILTY SAND |
| 45.0 | 196.9 | 119.1 | 3.06 | NA | *SILTY SAND to CLAYEY SAND |

NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002724

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| 45.5 | 221.2 | 133.1 | 2.86 | NA | *SILTY SAND to CLAYEY SAND |
| 46.0 | 174.3 | 104.0 | 3.14 | NA | *CLAYEY SAND to SANDY CLAY |
| 46.5 | 196.3 | 116.2 | 2.56 | NA | SILTY SAND to SANDY SILT |
| 47.0 | 345.7 | 203.1 | 2.02 | NA | SILTY SAND to SANDY SILT |
| 47.5 | 397.6 | 231.8 | 2.36 | NA | *SILTY SAND to CLAYEY SAND |
| 48.0 | 431.7 | 249.7 | 2.21 | NA | *SILTY SAND to CLAYEY SAND |
| 48.5 | 447.3 | 257.8 | 1.82 | NA | SAND to SILTY SAND |
| 49.0 | 449.9 | 258.4 | 2.34 | NA | *SILTY SAND to CLAYEY SAND |
| 49.5 | 463.5 | 265.4 | 2.14 | NA | *SILTY SAND to CLAYEY SAND |
| 50.0 | 468.2 | 267.2 | 1.93 | NA | SAND to SILTY SAND |
| 50.5 | 439.1 | 249.7 | 2.60 | NA | *SILTY SAND to CLAYEY SAND |
| 51.0 | 314.1 | 178.1 | 3.44 | NA | *CLAYEY SAND to SANDY CLAY |
| 51.5 | 360.4 | 203.6 | 1.70 | NA | SAND to SILTY SAND |
| 52.0 | 396.8 | 223.4 | 2.00 | NA | SAND to SILTY SAND |
| 52.5 | 382.5 | 214.6 | 1.14 | NA | SAND to SILTY SAND |
| 53.0 | 389.1 | 217.6 | 1.19 | NA | SAND to SILTY SAND |
| 53.5 | 466.9 | 260.2 | 1.57 | NA | SAND to SILTY SAND |
| 54.0 | 472.9 | 262.7 | 2.01 | NA | *SAND to SILTY SAND |
| 54.5 | 363.0 | 201.0 | 1.64 | NA | SAND to SILTY SAND |
| 55.0 | 268.2 | 148.0 | 2.38 | NA | SILTY SAND to SANDY SILT |
| 55.5 | 407.3 | 224.0 | 1.53 | NA | SAND to SILTY SAND |
| 56.0 | 422.8 | 231.8 | .69 | NA | SAND to SILTY SAND |
| 56.5 | 492.4 | 269.0 | .55 | NA | SANDY GRAVEL to SAND |
| 57.0 | 474.0 | 258.1 | .60 | NA | SANDY GRAVEL to SAND |
| 57.5 | 448.5 | 243.4 | .57 | NA | SANDY GRAVEL to SAND |
| 58.0 | 355.1 | 192.1 | .44 | NA | SANDY GRAVEL to SAND |
| 58.5 | 244.0 | 131.6 | 1.54 | NA | SAND to SILTY SAND |
| 59.0 | 259.6 | 139.5 | 2.04 | NA | SILTY SAND to SANDY SILT |
| 59.5 | 289.0 | 154.8 | 1.48 | NA | SAND to SILTY SAND |
| 60.0 | 258.6 | 138.1 | .97 | NA | SAND to SILTY SAND |
| 60.5 | 208.9 | 111.1 | 1.75 | NA | SILTY SAND to SANDY SILT |
| 61.0 | 194.6 | 103.2 | 1.72 | NA | SILTY SAND to SANDY SILT |
| 61.5 | 191.6 | 101.3 | 1.74 | NA | SILTY SAND to SANDY SILT |
| 62.0 | 210.7 | 111.0 | 2.41 | NA | SILTY SAND to SANDY SILT |
| 62.5 | 219.6 | 115.3 | 2.30 | NA | SILTY SAND to SANDY SILT |
| 63.0 | 227.9 | 119.3 | 2.49 | NA | SILTY SAND to SANDY SILT |
| 63.5 | 253.1 | 132.0 | 2.29 | NA | SILTY SAND to SANDY SILT |
| 64.0 | 301.3 | 156.6 | 2.27 | NA | SILTY SAND to SANDY SILT |
| 64.5 | 336.8 | 174.5 | 1.70 | NA | SAND to SILTY SAND |
| 65.0 | 301.3 | 155.6 | 1.69 | NA | SAND to SILTY SAND |
| 65.5 | 297.3 | 153.0 | 1.83 | NA | SAND to SILTY SAND |
| 66.0 | 137.0 | 70.3 | 6.05 | NA | *SANDY CLAY to SILTY CLAY |
| 66.5 | 149.0 | 76.2 | 5.50 | NA | *SANDY CLAY to SILTY CLAY |

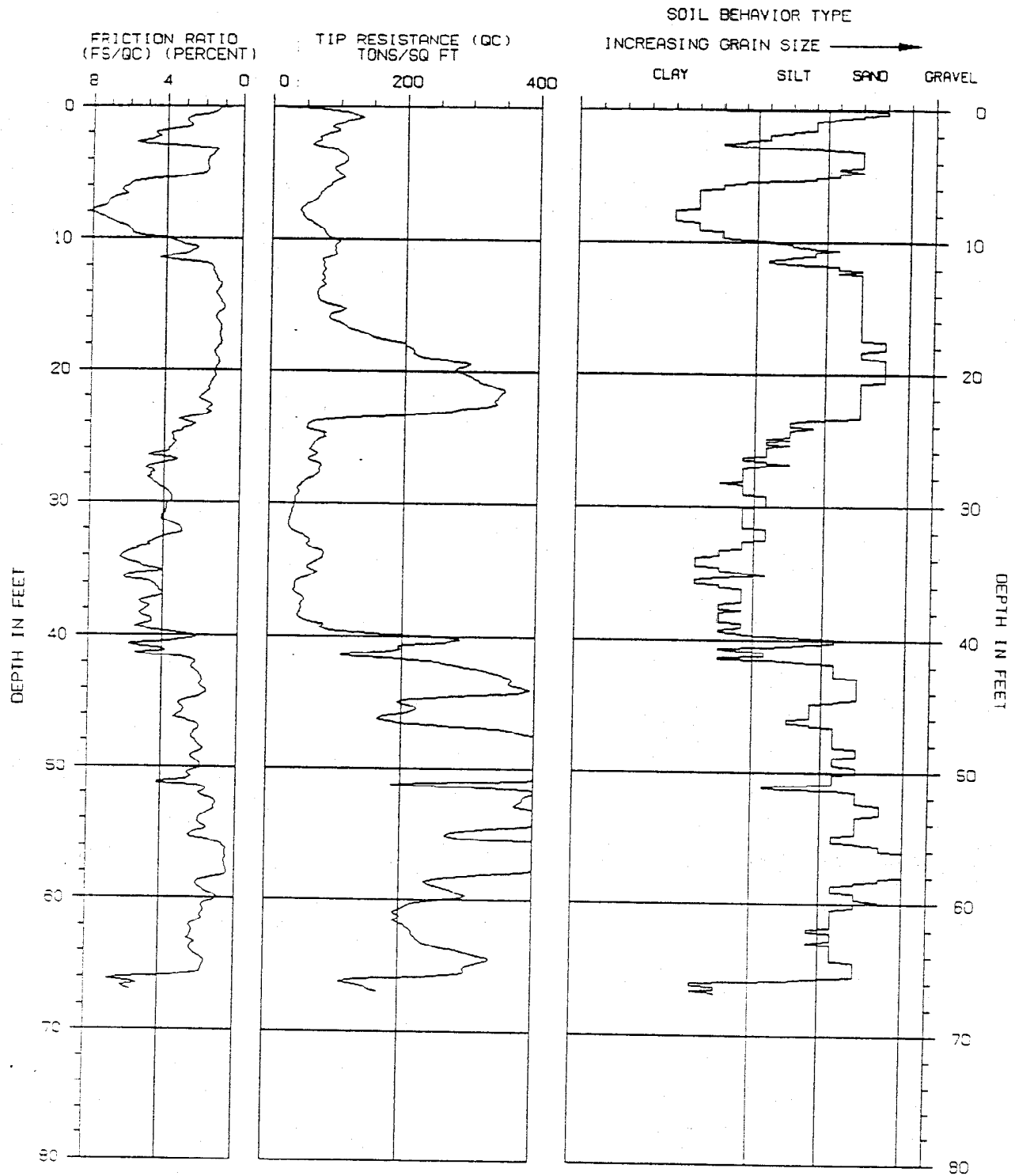
NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

MCK0002725



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 48.0 FT

CONE PENETRATION TEST


SOUNDING NUMBER: CPT-11

PROJECT NAME : HLA/MCKESSON-11

LOCATION : SANTA FE SPRGS

PROJECT NUMBER : 92-380-09501

DATE : 09-10-1991

 THE EARTH TECHNOLOGY CORPORATION

MCK0002726

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*   SOUNDING   : CPT-12
*   PROJECT    : HLA/MCKESSON-III
*   LOCATION   : SANTA FE SPRGS
*   DATE       : 10-28-1991
*
*
*   PROJECT NO : 92-380-09502
*   INSTRUMENT  : F15CKE091
*   SYSTEM      : T-2
*   OPERATOR    : EC/MR
*
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| DEPTH | TIP RESISTANCE | NORMALIZED | FRICTION | CONE PORE | SOIL BEHAVIOR TYPE |
|-------|----------------|-------------------------|--------------|-------------------|----------------------------|
| (ft) | (tsf) | TIP RESISTANCE
(tsf) | RATIO
(%) | PRESSURE
(tsf) | |
| .0 | .0 | .0 | .00 | NA | |
| .5 | 69.1 | 175.5 | 1.14 | NA | SAND to SILTY SAND |
| 1.0 | 148.7 | 333.1 | 1.39 | NA | SAND to SILTY SAND |
| 1.5 | 149.0 | 307.6 | 2.40 | NA | *SILTY SAND to CLAYEY SAND |
| 2.0 | 116.4 | 225.7 | 3.05 | NA | *SILTY SAND to CLAYEY SAND |
| 2.5 | 77.1 | 142.0 | 3.22 | NA | *CLAYEY SAND to SANDY CLAY |
| 3.0 | 53.7 | 94.7 | 2.49 | NA | SILTY SAND to SANDY SILT |
| 3.5 | 45.9 | 77.8 | 1.48 | NA | SILTY SAND to SANDY SILT |
| 4.0 | 39.0 | 63.9 | 2.28 | NA | SILTY SAND to SANDY SILT |
| 4.5 | 40.3 | 64.0 | 3.21 | NA | SANDY SILT to CLAYEY SILT |
| 5.0 | 35.7 | 55.7 | 4.94 | NA | *SANDY CLAY to SILTY CLAY |
| 5.5 | 33.7 | 50.5 | 4.87 | NA | *SANDY CLAY to SILTY CLAY |
| 6.0 | 35.3 | 51.5 | 4.54 | NA | *SANDY CLAY to SILTY CLAY |
| 6.5 | 36.0 | 51.4 | 6.31 | NA | *SANDY CLAY to SILTY CLAY |
| 7.0 | 30.5 | 42.6 | 6.71 | NA | *SANDY CLAY to SILTY CLAY |
| 7.5 | 26.3 | 36.0 | 5.66 | NA | *SANDY CLAY to SILTY CLAY |
| 8.0 | 31.6 | 42.3 | 4.04 | NA | CLAYEY SILT to SILTY CLAY |
| 8.5 | 124.9 | 163.7 | 3.55 | NA | *CLAYEY SAND to SANDY CLAY |
| 9.0 | 85.9 | 110.5 | 5.08 | NA | *SANDY CLAY to SILTY CLAY |
| 9.5 | 102.6 | 129.5 | 4.59 | NA | *SANDY CLAY to SILTY CLAY |
| 10.0 | 121.5 | 150.7 | 3.18 | NA | *SILTY SAND to CLAYEY SAND |
| 10.5 | 123.8 | 150.9 | 3.27 | NA | *CLAYEY SAND to SANDY CLAY |
| 11.0 | 104.4 | 125.2 | 3.22 | NA | *CLAYEY SAND to SANDY CLAY |
| 11.5 | 125.5 | 148.1 | 4.29 | NA | *CLAYEY SAND to SANDY CLAY |
| 12.0 | 154.3 | 179.2 | 3.95 | NA | *CLAYEY SAND to SANDY CLAY |
| 12.5 | 268.8 | 307.4 | 3.17 | NA | *SILTY SAND to CLAYEY SAND |
| 13.0 | 184.2 | 207.5 | 2.77 | NA | *SILTY SAND to CLAYEY SAND |
| 13.5 | 134.1 | 148.9 | 3.39 | NA | *CLAYEY SAND to SANDY CLAY |
| 14.0 | 121.2 | 132.3 | 5.19 | NA | *SANDY CLAY to SILTY CLAY |
| 14.5 | 96.7 | 104.1 | 4.21 | NA | *CLAYEY SAND to SANDY CLAY |
| 15.0 | 125.7 | 133.7 | 2.02 | NA | SILTY SAND to SANDY SILT |
| 15.5 | 220.1 | 231.7 | 2.12 | NA | SILTY SAND to SANDY SILT |
| 16.0 | 112.3 | 116.3 | 4.95 | NA | *SANDY CLAY to SILTY CLAY |
| 16.5 | 109.4 | 111.9 | 5.16 | NA | *SANDY CLAY to SILTY CLAY |
| 17.0 | 114.4 | 115.5 | 4.94 | NA | *SANDY CLAY to SILTY CLAY |
| 17.5 | 196.8 | 196.3 | 2.79 | NA | *SILTY SAND to CLAYEY SAND |
| 18.0 | 182.6 | 179.8 | 4.68 | NA | *CLAYEY SAND to SANDY CLAY |
| 18.5 | 195.5 | 190.3 | 4.93 | NA | *SANDY CLAY to SILTY CLAY |
| 19.0 | 177.8 | 171.0 | 4.14 | NA | *CLAYEY SAND to SANDY CLAY |
| 19.5 | 93.2 | 88.5 | 5.30 | NA | *SANDY CLAY to SILTY CLAY |
| 20.0 | 119.2 | 112.0 | 3.94 | NA | *CLAYEY SAND to SANDY CLAY |

The Earth Technology Corporation

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| 20.5 | 166.1 | 154.2 | 2.38 | NA | SILTY SAND to SANDY SILT |
| 21.0 | 216.1 | 198.4 | 2.37 | NA | *SILTY SAND to CLAYEY SAND |
| 21.5 | 116.9 | 106.2 | 4.73 | NA | *SANDY CLAY to SILTY CLAY |
| 22.0 | 82.5 | 74.1 | 4.86 | NA | *SANDY CLAY to SILTY CLAY |
| 22.5 | 112.4 | 99.8 | 4.70 | NA | *SANDY CLAY to SILTY CLAY |
| 23.0 | 142.5 | 125.2 | 2.80 | NA | *SILTY SAND to CLAYEY SAND |
| 23.5 | 93.3 | 81.1 | 3.27 | NA | SANDY SILT to CLAYEY SILT |
| 24.0 | 50.1 | 43.1 | 4.51 | NA | *SANDY CLAY to SILTY CLAY |
| 24.5 | 45.9 | 39.1 | 3.70 | NA | SANDY SILT to CLAYEY SILT |
| 25.0 | 50.6 | 42.6 | 3.72 | NA | SANDY SILT to CLAYEY SILT |
| 25.5 | 50.9 | 42.4 | 3.93 | NA | SANDY SILT to CLAYEY SILT |
| 26.0 | 51.4 | 42.5 | 4.78 | NA | *SANDY CLAY to SILTY CLAY |
| 26.5 | 51.4 | 42.0 | 4.95 | NA | *SANDY CLAY to SILTY CLAY |
| 27.0 | 38.4 | 31.0 | 5.98 | NA | *SANDY CLAY to SILTY CLAY |
| 27.5 | 31.5 | 25.2 | 4.13 | NA | CLAYEY SILT to SILTY CLAY |
| 28.0 | 44.8 | 35.5 | 4.36 | NA | CLAYEY SILT to SILTY CLAY |
| 28.5 | 36.7 | 28.8 | 6.26 | NA | *SANDY CLAY to SILTY CLAY |
| 29.0 | 23.9 | 18.6 | 5.34 | NA | SILTY CLAY TO CLAY |
| 29.5 | 26.4 | 20.3 | 4.63 | NA | CLAYEY SILT to SILTY CLAY |
| 30.0 | 28.6 | 21.8 | 6.03 | NA | SILTY CLAY TO CLAY |
| 30.5 | 31.5 | 23.8 | 5.64 | NA | SILTY CLAY TO CLAY |
| 31.0 | 28.7 | 21.5 | 5.31 | NA | CLAYEY SILT to SILTY CLAY |
| 31.5 | 39.1 | 29.0 | 4.64 | NA | CLAYEY SILT to SILTY CLAY |
| 32.0 | 28.5 | 20.9 | 6.29 | NA | SILTY CLAY TO CLAY |
| 32.5 | 33.6 | 24.5 | 5.82 | NA | *SANDY CLAY to SILTY CLAY |
| 33.0 | 62.0 | 44.8 | 4.77 | NA | *SANDY CLAY to SILTY CLAY |
| 33.5 | 47.0 | 33.6 | 5.09 | NA | *SANDY CLAY to SILTY CLAY |
| 34.0 | 55.9 | 39.6 | 4.26 | NA | CLAYEY SILT to SILTY CLAY |
| 34.5 | 62.9 | 44.2 | 6.26 | NA | *SANDY CLAY to SILTY CLAY |
| 35.0 | 68.8 | 47.9 | 7.22 | NA | *SANDY CLAY to SILTY CLAY |
| 35.5 | 69.7 | 48.1 | 8.08 | NA | *SANDY CLAY to SILTY CLAY |
| 36.0 | 62.2 | 42.5 | 7.03 | NA | *SANDY CLAY to SILTY CLAY |
| 36.5 | 63.9 | 43.3 | 7.95 | NA | *SANDY CLAY to SILTY CLAY |
| 37.0 | 57.3 | 38.5 | 7.40 | NA | *SANDY CLAY to SILTY CLAY |
| 37.5 | 49.1 | 32.7 | 7.76 | NA | *SANDY CLAY to SILTY CLAY |
| 38.0 | 56.7 | 37.4 | 7.24 | NA | *SANDY CLAY to SILTY CLAY |
| 38.5 | 38.2 | 25.0 | 8.70 | NA | *SANDY CLAY to SILTY CLAY |
| 39.0 | 34.2 | 22.2 | 6.43 | NA | *SANDY CLAY to SILTY CLAY |
| 39.5 | 36.1 | 23.2 | 5.90 | NA | SILTY CLAY TO CLAY |
| 40.0 | 35.2 | 22.4 | 5.35 | NA | CLAYEY SILT to SILTY CLAY |
| 40.5 | 31.3 | 19.8 | 4.86 | NA | CLAYEY SILT to SILTY CLAY |
| 41.0 | 38.0 | 23.8 | 5.61 | NA | SILTY CLAY TO CLAY |
| 41.5 | 40.0 | 24.9 | 5.99 | NA | *SANDY CLAY to SILTY CLAY |
| 42.0 | 73.8 | 45.6 | 5.48 | NA | *SANDY CLAY to SILTY CLAY |
| 42.5 | 80.1 | 49.0 | 5.87 | NA | *SANDY CLAY to SILTY CLAY |
| 43.0 | 118.3 | 71.8 | 4.06 | NA | *CLAYEY SAND to SANDY CLAY |
| 43.5 | 110.5 | 66.5 | 4.85 | NA | *SANDY CLAY to SILTY CLAY |
| 44.0 | 86.4 | 51.6 | 6.07 | NA | *SANDY CLAY to SILTY CLAY |
| 44.5 | 99.5 | 58.9 | 4.95 | NA | *SANDY CLAY to SILTY CLAY |
| 45.0 | 44.1 | 25.9 | 5.79 | NA | *SANDY CLAY to SILTY CLAY |

NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

MCK0002728

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| 45.5 | 145.9 | 85.0 | 2.36 | NA | SILTY SAND to SANDY SILT |
| 46.0 | 119.6 | 69.1 | 4.03 | NA | *CLAYEY SAND to SANDY CLAY |
| 46.5 | 198.3 | 113.6 | 2.16 | NA | SILTY SAND to SANDY SILT |
| 47.0 | 230.3 | 130.9 | 2.05 | NA | SILTY SAND to SANDY SILT |
| 47.5 | 272.0 | 153.3 | 2.07 | NA | SILTY SAND to SANDY SILT |
| 48.0 | 278.9 | 155.9 | 2.39 | NA | SILTY SAND to SANDY SILT |
| 48.5 | 301.9 | 167.4 | 2.06 | NA | SILTY SAND to SANDY SILT |
| 49.0 | 342.1 | 188.2 | 2.08 | NA | SILTY SAND to SANDY SILT |
| 49.5 | 380.2 | 207.5 | 1.68 | NA | SILTY SAND to SANDY SILT |
| 50.0 | 394.3 | 213.4 | 1.46 | NA | SAND to SILTY SAND |
| 50.5 | 381.9 | 205.1 | 1.41 | NA | SAND to SILTY SAND |
| 51.0 | 406.2 | 216.4 | 1.20 | NA | SAND to SILTY SAND |
| 51.5 | 380.4 | 201.1 | .88 | NA | SAND to SILTY SAND |
| 52.0 | 331.6 | 173.9 | .87 | NA | SAND to SILTY SAND |
| 52.5 | 352.7 | 183.4 | .82 | NA | SAND to SILTY SAND |
| 53.0 | 332.0 | 171.3 | .66 | NA | SAND to SILTY SAND |
| 53.5 | 328.4 | 168.2 | .64 | NA | SAND to SILTY SAND |
| 54.0 | 302.9 | 153.9 | 1.05 | NA | SAND to SILTY SAND |
| 54.5 | 299.8 | 151.1 | .96 | NA | SAND to SILTY SAND |
| 55.0 | 345.0 | 172.5 | 1.17 | NA | SAND to SILTY SAND |
| 55.5 | 349.5 | 174.1 | 1.08 | NA | SAND to SILTY SAND |
| 56.0 | 324.0 | 160.8 | 1.00 | NA | SAND to SILTY SAND |
| 56.5 | 362.4 | 179.3 | .70 | NA | SAND to SILTY SAND |
| 57.0 | 388.6 | 191.5 | .72 | NA | SAND to SILTY SAND |
| 57.5 | 411.5 | 202.0 | .69 | NA | SAND to SILTY SAND |
| 58.0 | 415.1 | 203.1 | .78 | NA | SAND to SILTY SAND |
| 58.5 | 432.5 | 210.8 | .70 | NA | SAND to SILTY SAND |
| 59.0 | 449.7 | 218.5 | .73 | NA | SAND to SILTY SAND |
| 59.5 | 435.5 | 210.8 | .70 | NA | SAND to SILTY SAND |
| 60.0 | 391.1 | 188.6 | .54 | NA | SAND to SILTY SAND |
| 60.5 | 294.5 | 141.5 | 1.07 | NA | SAND to SILTY SAND |
| 61.0 | 232.8 | 111.5 | 1.78 | NA | SAND to SILTY SAND |
| 61.5 | 93.9 | 44.8 | 2.99 | NA | SILTY SAND to SANDY SILT |
| 62.0 | 43.2 | 20.5 | 2.74 | NA | SANDY SILT to CLAYEY SILT |
| 62.5 | 282.7 | 133.9 | 1.33 | NA | SANDY SILT to CLAYEY SILT |
| 63.0 | 129.9 | 61.3 | 4.39 | NA | SAND to SILTY SAND |
| 63.5 | 273.8 | 128.8 | 2.20 | NA | *SANDY CLAY to SILTY CLAY |
| 64.0 | 354.1 | 165.9 | 2.21 | NA | SILTY SAND to SANDY SILT |
| 64.5 | 416.6 | 194.5 | 1.55 | NA | SILTY SAND to SANDY SILT |
| 65.0 | 410.5 | 191.0 | 1.10 | NA | SAND to SILTY SAND |
| | | | | NA | SAND to SILTY SAND |

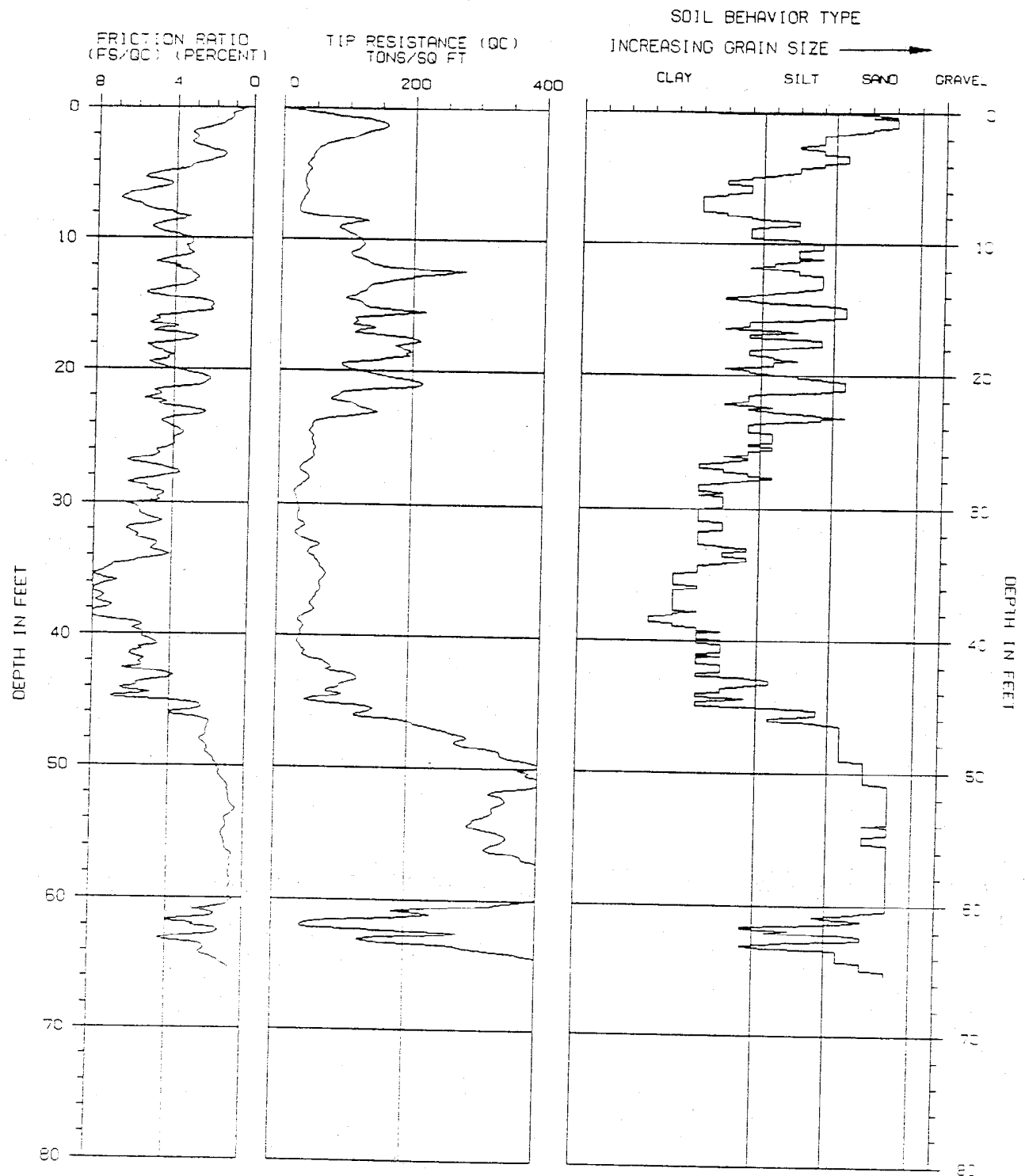
NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

MCK0002729



ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

CONE PENETRATION TEST


SOUNDING NUMBER: CPT-12

PROJECT NAME : HLA/MCKESSON-111

LOCATION : SANTA FE SPRGS

PROJECT NUMBER : 92-360-09502

DATE : 10-28-1991

 THE EARTH TECHNOLOGY CORPORATION

MCK0002730

 *
 *
 *
 * SOUNDING : CPT-13 PROJECT NO : 92-380-09502
 * PROJECT : HLA/MCKESSON-III INSTRUMENT : F15CKE091
 * LOCATION : SANTA FE SPRGS SYSTEM : T-2
 * DATE : 10-28-1991 OPERATOR : EC/MR
 *

PAGE 1 of 3

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| .0 | .0 | .0 | .00 | NA | |
| .5 | 39.3 | 99.8 | 1.27 | NA | SAND to SILTY SAND |
| 1.0 | 67.2 | 150.6 | 1.47 | NA | SAND to SILTY SAND |
| 1.5 | 52.8 | 109.0 | 2.68 | NA | SILTY SAND to SANDY SILT |
| 2.0 | 40.2 | 78.0 | 4.10 | NA | *CLAYEY SAND to SANDY CLAY |
| 2.5 | 49.9 | 91.9 | 3.37 | NA | *CLAYEY SAND to SANDY CLAY |
| 3.0 | 40.6 | 71.6 | 4.38 | NA | *SANDY CLAY to SILTY CLAY |
| 3.5 | 37.0 | 62.7 | 1.79 | NA | SILTY SAND to SANDY SILT |
| 4.0 | 34.5 | 56.5 | 1.42 | NA | SILTY SAND to SANDY SILT |
| 4.5 | 22.2 | 35.2 | 1.32 | NA | SILTY SAND to SANDY SILT |
| 5.0 | 14.9 | 23.0 | 1.37 | NA | SILTY SAND to SANDY SILT |
| 5.5 | 10.5 | 15.8 | 2.02 | NA | SANDY SILT to CLAYEY SILT |
| 6.0 | 28.3 | 41.4 | 1.71 | NA | SILTY SAND to SANDY SILT |
| 6.5 | 42.0 | 60.0 | 3.83 | NA | *CLAYEY SAND to SANDY CLAY |
| 7.0 | 53.7 | 74.9 | 4.36 | NA | *SANDY CLAY to SILTY CLAY |
| 7.5 | 35.0 | 47.8 | 3.01 | NA | SANDY SILT to CLAYEY SILT |
| 8.0 | 34.8 | 46.5 | 1.58 | NA | SILTY SAND to SANDY SILT |
| 8.5 | 59.3 | 77.7 | 1.21 | NA | SAND to SILTY SAND |
| 9.0 | 60.8 | 78.2 | 2.20 | NA | SILTY SAND to SANDY SILT |
| 9.5 | 86.8 | 109.5 | .92 | NA | SAND to SILTY SAND |
| 10.0 | 122.3 | 151.7 | .80 | NA | SAND to SILTY SAND |
| 10.5 | 137.5 | 167.6 | .87 | NA | SAND to SILTY SAND |
| 11.0 | 164.9 | 197.6 | .74 | NA | SAND to SILTY SAND |
| 11.5 | 261.1 | 308.0 | .71 | NA | SAND to SILTY SAND |
| 12.0 | 323.7 | 375.9 | .87 | NA | SANDY GRAVEL to SAND |
| 12.5 | 374.0 | 427.6 | 1.04 | NA | SANDY GRAVEL to SAND |
| 13.0 | 383.7 | 432.2 | 1.23 | NA | SAND to SILTY SAND |
| 13.5 | 383.4 | 425.6 | 1.03 | NA | SAND to SILTY SAND |
| 14.0 | 397.4 | 434.8 | 1.03 | NA | SAND to SILTY SAND |
| 14.5 | 390.7 | 421.5 | 1.06 | NA | SAND to SILTY SAND |
| 15.0 | 369.5 | 393.3 | 1.06 | NA | SAND to SILTY SAND |
| 15.5 | 273.1 | 286.8 | 1.31 | NA | SAND to SILTY SAND |
| 16.0 | 262.7 | 272.2 | .85 | NA | SAND to SILTY SAND |
| 16.5 | 267.1 | 273.2 | .70 | NA | SAND to SILTY SAND |
| 17.0 | 315.9 | 319.1 | .67 | NA | SANDY GRAVEL to SAND |
| 17.5 | 348.7 | 347.8 | .97 | NA | SANDY GRAVEL to SAND |
| 18.0 | 344.8 | 339.6 | 1.28 | NA | SAND to SILTY SAND |
| 18.5 | 305.9 | 297.7 | 1.54 | NA | SAND to SILTY SAND |
| 19.0 | 297.3 | 285.9 | 1.66 | NA | SAND to SILTY SAND |
| 19.5 | 303.7 | 288.6 | 1.60 | NA | SAND to SILTY SAND |
| 20.0 | 323.2 | 303.6 | 1.54 | NA | SAND to SILTY SAND |

NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

MCK0002731

The Earth Technology
 Corporation

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| 20.5 | 327.8 | 304.4 | 1.34 | NA | SAND to SILTY SAND |
| 21.0 | 333.9 | 306.6 | 1.48 | NA | SAND to SILTY SAND |
| 21.5 | 374.9 | 340.4 | 1.52 | NA | SAND to SILTY SAND |
| 22.0 | 390.2 | 350.3 | 1.57 | NA | SAND to SILTY SAND |
| 22.5 | 406.5 | 361.1 | 1.41 | NA | SAND to SILTY SAND |
| 23.0 | 236.0 | 207.3 | 2.46 | NA | *SILTY SAND to CLAYEY SAND |
| 23.5 | 107.2 | 93.1 | 2.83 | NA | SILTY SAND to SANDY SILT |
| 24.0 | 389.5 | 335.0 | 1.28 | NA | SAND to SILTY SAND |
| 24.5 | 169.9 | 144.6 | 3.27 | NA | *CLAYEY SAND to SANDY CLAY |
| 25.0 | 95.8 | 80.7 | 3.53 | NA | *CLAYEY SAND to SANDY CLAY |
| 25.5 | 106.6 | 88.9 | 3.61 | NA | *CLAYEY SAND to SANDY CLAY |
| 26.0 | 84.4 | 69.6 | 3.50 | NA | *CLAYEY SAND to SANDY CLAY |
| 26.5 | 65.6 | 53.6 | 3.03 | NA | SANDY SILT to CLAYEY SILT |
| 27.0 | 55.6 | 45.0 | 1.98 | NA | SILTY SAND to SANDY SILT |
| 27.5 | 60.2 | 48.2 | 2.77 | NA | SANDY SILT to CLAYEY SILT |
| 28.0 | 64.0 | 50.7 | 2.83 | NA | SANDY SILT to CLAYEY SILT |
| 28.5 | 65.8 | 51.7 | 2.89 | NA | SANDY SILT to CLAYEY SILT |
| 29.0 | 62.2 | 48.4 | 3.33 | NA | SANDY SILT to CLAYEY SILT |
| 29.5 | 54.2 | 41.7 | 3.35 | NA | SANDY SILT to CLAYEY SILT |
| 30.0 | 64.9 | 49.5 | 2.63 | NA | SANDY SILT to CLAYEY SILT |
| 30.5 | 65.3 | 49.4 | 3.08 | NA | SANDY SILT to CLAYEY SILT |
| 31.0 | 50.6 | 37.9 | 3.14 | NA | SANDY SILT to CLAYEY SILT |
| 31.5 | 44.0 | 32.7 | 3.32 | NA | SANDY SILT to CLAYEY SILT |
| 32.0 | 44.7 | 32.9 | 3.00 | NA | SANDY SILT to CLAYEY SILT |
| 32.5 | 42.2 | 30.7 | 3.16 | NA | SANDY SILT to CLAYEY SILT |
| 33.0 | 41.1 | 29.6 | 3.02 | NA | SANDY SILT to CLAYEY SILT |
| 33.5 | 38.5 | 27.6 | 3.43 | NA | SANDY SILT to CLAYEY SILT |
| 34.0 | 38.7 | 27.4 | 2.99 | NA | SANDY SILT to CLAYEY SILT |
| 34.5 | 39.9 | 28.0 | 2.68 | NA | SANDY SILT to CLAYEY SILT |
| 35.0 | 39.3 | 27.4 | 3.29 | NA | SANDY SILT to CLAYEY SILT |
| 35.5 | 42.5 | 29.3 | 2.72 | NA | SANDY SILT to CLAYEY SILT |
| 36.0 | 50.6 | 34.6 | 2.31 | NA | SANDY SILT to CLAYEY SILT |
| 36.5 | 57.0 | 38.6 | 3.76 | NA | SANDY SILT to CLAYEY SILT |
| 37.0 | 67.8 | 45.6 | 4.18 | NA | *SANDY CLAY to SILTY CLAY |
| 37.5 | 71.5 | 47.6 | 4.96 | NA | *SANDY CLAY to SILTY CLAY |
| 38.0 | 58.8 | 38.9 | 6.07 | NA | *SANDY CLAY to SILTY CLAY |
| 38.5 | 44.9 | 29.4 | 5.24 | NA | *SANDY CLAY to SILTY CLAY |
| 39.0 | 36.5 | 23.7 | 4.72 | NA | CLAYEY SILT to SILTY CLAY |
| 39.5 | 39.0 | 25.1 | 4.08 | NA | CLAYEY SILT to SILTY CLAY |
| 40.0 | 37.9 | 24.2 | 4.72 | NA | CLAYEY SILT to SILTY CLAY |
| 40.5 | 37.9 | 24.0 | 4.38 | NA | CLAYEY SILT to SILTY CLAY |
| 41.0 | 36.0 | 22.6 | 4.01 | NA | CLAYEY SILT to SILTY CLAY |
| 41.5 | 47.0 | 29.2 | 3.98 | NA | CLAYEY SILT to SILTY CLAY |
| 42.0 | 41.1 | 25.3 | 6.54 | NA | *SANDY CLAY to SILTY CLAY |
| 42.5 | 41.2 | 25.2 | 5.49 | NA | SILTY CLAY to CLAY |
| 43.0 | 45.2 | 27.4 | 6.66 | NA | *SANDY CLAY to SILTY CLAY |
| 43.5 | 71.3 | 42.9 | 5.46 | NA | *SANDY CLAY to SILTY CLAY |
| 44.0 | 117.3 | 70.0 | 4.96 | NA | *SANDY CLAY to SILTY CLAY |
| 44.5 | 163.2 | 96.6 | 2.77 | NA | SILTY SAND to SANDY SILT |
| 45.0 | 203.8 | 119.6 | 1.87 | NA | SILTY SAND to SANDY SILT |

NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

MCK0002732

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| 45.5 | 228.2 | 132.9 | 1.71 | NA | SAND to SILTY SAND |
| 46.0 | 239.3 | 138.2 | 1.82 | NA | SILTY SAND to SANDY SILT |
| 46.5 | 233.9 | 134.0 | 1.85 | NA | SILTY SAND to SANDY SILT |
| 47.0 | 239.0 | 135.8 | 1.55 | NA | SAND to SILTY SAND |
| 47.5 | 261.2 | 147.2 | 1.70 | NA | SAND to SILTY SAND |
| 48.0 | 282.9 | 158.2 | 1.61 | NA | SAND to SILTY SAND |
| 48.5 | 316.1 | 175.3 | 1.62 | NA | SAND to SILTY SAND |
| 49.0 | 324.3 | 178.4 | 1.99 | NA | SAND to SILTY SAND |
| 49.5 | 325.2 | 177.5 | 2.00 | NA | SILTY SAND to SANDY SILT |
| 50.0 | 349.4 | 189.2 | 2.21 | NA | SILTY SAND to SANDY SILT |
| 50.5 | 385.7 | 207.1 | 2.08 | NA | SILTY SAND to SANDY SILT |
| 51.0 | 384.6 | 204.9 | 2.09 | NA | SILTY SAND to SANDY SILT |
| 51.5 | 307.0 | 162.3 | .99 | NA | SAND to SILTY SAND |
| 52.0 | 366.0 | 191.9 | 1.29 | NA | SAND to SILTY SAND |
| 52.5 | 383.9 | 199.7 | .79 | NA | SAND to SILTY SAND |
| 53.0 | 431.1 | 222.5 | .53 | NA | SANDY GRAVEL to SAND |
| 53.5 | 411.6 | 210.7 | .42 | NA | SANDY GRAVEL to SAND |
| 54.0 | 398.1 | 202.2 | .44 | NA | SANDY GRAVEL to SAND |
| 54.5 | 379.0 | 191.0 | .50 | NA | SAND to SILTY SAND |
| 55.0 | 384.7 | 192.3 | .48 | NA | SAND to SILTY SAND |
| 55.5 | 350.4 | 174.5 | .44 | NA | SAND to SILTY SAND |
| 56.0 | 381.8 | 189.5 | .70 | NA | SAND to SILTY SAND |
| 56.5 | 331.7 | 164.1 | .57 | NA | SAND to SILTY SAND |
| 57.0 | 200.4 | 98.7 | 2.11 | NA | SILTY SAND to SANDY SILT |
| 57.5 | 194.7 | 95.6 | 1.97 | NA | SILTY SAND to SANDY SILT |
| 58.0 | 114.2 | 55.9 | 3.99 | NA | *CLAYEY SAND to SANDY CLAY |
| 58.5 | 102.7 | 50.1 | 5.38 | NA | *SANDY CLAY to SILTY CLAY |
| 59.0 | 170.3 | 82.7 | 3.16 | NA | SANDY SILT to CLAYEY SILT |
| 59.5 | 276.6 | 133.9 | 1.22 | NA | SAND to SILTY SAND |
| 60.0 | 404.1 | 194.9 | .94 | NA | SAND to SILTY SAND |
| 60.5 | 273.5 | 131.4 | 1.12 | NA | SAND to SILTY SAND |
| 61.0 | 242.0 | 115.9 | 2.35 | NA | SAND to SILTY SAND |
| 61.5 | 283.4 | 135.2 | 1.43 | NA | SAND to SILTY SAND |
| 62.0 | 311.2 | 148.0 | 1.30 | NA | SAND to SILTY SAND |
| 62.5 | 308.4 | 146.1 | 1.28 | NA | SAND to SILTY SAND |
| 63.0 | 325.7 | 153.7 | 1.16 | NA | SAND to SILTY SAND |
| 63.5 | 319.2 | 150.1 | 1.16 | NA | SAND to SILTY SAND |
| 64.0 | 304.4 | 142.6 | 1.17 | NA | SAND to SILTY SAND |
| 64.5 | 292.2 | 136.4 | 1.16 | NA | SAND to SILTY SAND |
| 65.0 | 302.6 | 140.8 | 1.14 | NA | SAND to SILTY SAND |
| 65.5 | 374.0 | 173.4 | .98 | NA | SAND to SILTY SAND |

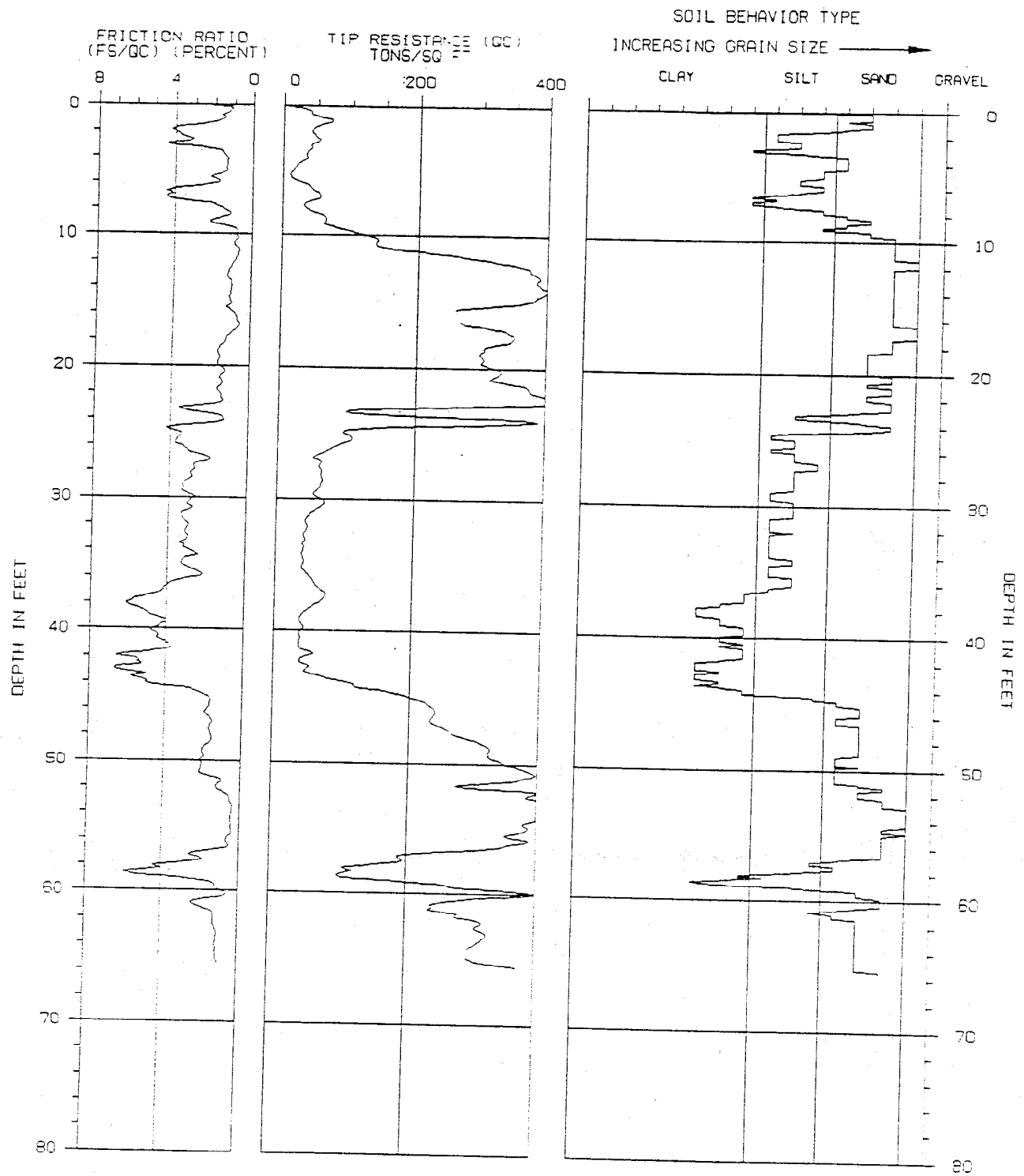
NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

MCK0002733



ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

CONE PENETRATION TEST


SOUNDING NUMBER: CPT-13

PROJECT NAME : HLA/MCKESSON-111

LOCATION : SANTA FE SPRGS

PROJECT NUMBER : 92-380-09502

DATE : 10-28-1991

 THE EARTH TECHNOLOGY CORPORATION

MCK0002734

 *
 *
 *
 * SOUNDING : CPT-14 PROJECT NO : 92-380-09502
 * PROJECT : HLA/MCKESSON-III INSTRUMENT : F15CKE091
 * LOCATION : SANTA FE SPRGS SYSTEM : T-2
 * DATE : 10-28-1991 OPERATOR : EC/MR
 *

PAGE 1 of 3

| DEPTH | TIP RESISTANCE | NORMALIZED | FRICTION | CONE PORE | SOIL BEHAVIOR TYPE |
|-------|----------------|----------------|----------|-----------|----------------------------|
| (ft) | (tsf) | TIP RESISTANCE | RATIO | PRESSURE | |
| | | (tsf) | (%) | (tsf) | |
| 0.0 | 0.0 | 0.0 | 0.00 | NA | |
| 0.5 | 34.5 | 87.6 | 1.14 | NA | SAND to SILTY SAND |
| 1.0 | 80.6 | 180.7 | 1.17 | NA | SAND to SILTY SAND |
| 1.5 | 68.2 | 140.8 | 2.48 | NA | SILTY SAND to SANDY SILT |
| 2.0 | 93.6 | 181.5 | 2.91 | NA | *SILTY SAND to CLAYEY SAND |
| 2.5 | 96.4 | 177.6 | 3.15 | NA | *SILTY SAND to CLAYEY SAND |
| 3.0 | 63.5 | 111.9 | 2.44 | NA | SILTY SAND to SANDY SILT |
| 3.5 | 85.5 | 145.0 | 1.80 | NA | SAND to SILTY SAND |
| 4.0 | 82.8 | 135.7 | 1.55 | NA | SAND to SILTY SAND |
| 4.5 | 85.6 | 135.8 | 1.69 | NA | SAND to SILTY SAND |
| 5.0 | 91.8 | 141.6 | 1.72 | NA | SAND to SILTY SAND |
| 5.5 | 46.9 | 70.4 | 2.63 | NA | SILTY SAND to SANDY SILT |
| 6.0 | 25.8 | 37.7 | 3.36 | NA | SANDY SILT to CLAYEY SILT |
| 6.5 | 30.9 | 44.1 | 3.11 | NA | SANDY SILT to CLAYEY SILT |
| 7.0 | 44.0 | 61.4 | 4.06 | NA | *CLAYEY SAND to SANDY CLAY |
| 7.5 | 58.6 | 80.0 | 4.57 | NA | *SANDY CLAY to SILTY CLAY |
| 8.0 | 84.5 | 113.0 | 4.79 | NA | *SANDY CLAY to SILTY CLAY |
| 8.5 | 131.6 | 172.5 | 4.70 | NA | *SANDY CLAY to SILTY CLAY |
| 9.0 | 143.4 | 184.5 | 4.74 | NA | *SANDY CLAY to SILTY CLAY |
| 9.5 | 174.5 | 220.3 | 2.86 | NA | *SILTY SAND to CLAYEY SAND |
| 10.0 | 166.3 | 206.2 | 1.81 | NA | SAND to SILTY SAND |
| 10.5 | 121.8 | 148.5 | 2.73 | NA | *SILTY SAND to CLAYEY SAND |
| 11.0 | 113.6 | 136.2 | 1.70 | NA | SAND to SILTY SAND |
| 11.5 | 142.7 | 168.4 | 1.69 | NA | SAND to SILTY SAND |
| 12.0 | 131.7 | 152.9 | 2.30 | NA | SILTY SAND to SANDY SILT |
| 12.5 | 97.8 | 111.8 | 4.20 | NA | *CLAYEY SAND to SANDY CLAY |
| 13.0 | 117.3 | 132.1 | 1.41 | NA | SAND to SILTY SAND |
| 13.5 | 131.4 | 145.9 | .73 | NA | SAND to SILTY SAND |
| 14.0 | 138.6 | 151.6 | .73 | NA | SAND to SILTY SAND |
| 14.5 | 164.1 | 177.0 | .75 | NA | SAND to SILTY SAND |
| 15.0 | 167.2 | 178.0 | .67 | NA | SAND to SILTY SAND |
| 15.5 | 138.5 | 145.4 | .74 | NA | SAND to SILTY SAND |
| 16.0 | 129.6 | 134.3 | .72 | NA | SAND to SILTY SAND |
| 16.5 | 77.7 | 79.4 | .58 | NA | SAND to SILTY SAND |
| 17.0 | 69.5 | 70.2 | 1.63 | NA | SILTY SAND to SANDY SILT |
| 17.5 | 78.2 | 78.0 | 4.70 | NA | *SANDY CLAY to SILTY CLAY |
| 18.0 | 108.6 | 107.0 | 4.25 | NA | *CLAYEY SAND to SANDY CLAY |
| 18.5 | 72.6 | 70.7 | 6.10 | NA | *SANDY CLAY to SILTY CLAY |
| 19.0 | 47.3 | 45.4 | 5.99 | NA | *SANDY CLAY to SILTY CLAY |
| 19.5 | 128.7 | 122.3 | 4.14 | NA | *CLAYEY SAND to SANDY CLAY |
| 20.0 | 215.6 | 202.5 | 2.58 | NA | *SILTY SAND to CLAYEY SAND |

NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

MCK0002735

The Earth Technology
 Corporation

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| 20.5 | 232.1 | 215.5 | 2.98 | NA | *SILTY SAND to CLAYEY SAND |
| 21.0 | 133.1 | 122.2 | 4.11 | NA | *CLAYEY SAND to SANDY CLAY |
| 21.5 | 79.9 | 72.5 | 4.25 | NA | *CLAYEY SAND to SANDY CLAY |
| 22.0 | 128.5 | 115.4 | 4.30 | NA | *CLAYEY SAND to SANDY CLAY |
| 22.5 | 139.8 | 124.2 | 4.69 | NA | *SANDY CLAY to SILTY CLAY |
| 23.0 | 145.3 | 127.7 | 4.25 | NA | *CLAYEY SAND to SANDY CLAY |
| 23.5 | 151.5 | 131.7 | 3.09 | NA | *SILTY SAND to CLAYEY SAND |
| 24.0 | 103.9 | 89.4 | 5.74 | NA | *SANDY CLAY to SILTY CLAY |
| 24.5 | 74.8 | 63.7 | 6.11 | NA | *SANDY CLAY to SILTY CLAY |
| 25.0 | 73.2 | 61.6 | 5.45 | NA | *SANDY CLAY to SILTY CLAY |
| 25.5 | 52.4 | 43.7 | 5.99 | NA | *SANDY CLAY to SILTY CLAY |
| 26.0 | 62.4 | 51.5 | 5.68 | NA | *SANDY CLAY to SILTY CLAY |
| 26.5 | 49.6 | 40.5 | 4.84 | NA | *SANDY CLAY to SILTY CLAY |
| 27.0 | 64.0 | 51.8 | 4.80 | NA | *SANDY CLAY to SILTY CLAY |
| 27.5 | 64.0 | 51.3 | 5.35 | NA | *SANDY CLAY to SILTY CLAY |
| 28.0 | 57.4 | 45.6 | 6.03 | NA | *SANDY CLAY to SILTY CLAY |
| 28.5 | 50.9 | 40.0 | 5.09 | NA | *SANDY CLAY to SILTY CLAY |
| 29.0 | 56.5 | 44.0 | 5.82 | NA | *SANDY CLAY to SILTY CLAY |
| 29.5 | 29.0 | 22.3 | 6.76 | NA | *SANDY CLAY to SILTY CLAY |
| 30.0 | 23.0 | 17.6 | 5.82 | NA | SILTY CLAY TO CLAY |
| 30.5 | 27.0 | 20.4 | 4.96 | NA | CLAYEY SILT to SILTY CLAY |
| 31.0 | 29.8 | 22.3 | 4.79 | NA | CLAYEY SILT to SILTY CLAY |
| 31.5 | 32.3 | 23.9 | 4.86 | NA | CLAYEY SILT to SILTY CLAY |
| 32.0 | 30.4 | 22.3 | 3.94 | NA | CLAYEY SILT to SILTY CLAY |
| 32.5 | 36.7 | 26.7 | 4.71 | NA | CLAYEY SILT to SILTY CLAY |
| 33.0 | 34.0 | 24.5 | 5.87 | NA | *SANDY CLAY to SILTY CLAY |
| 33.5 | 35.6 | 25.5 | 6.05 | NA | *SANDY CLAY to SILTY CLAY |
| 34.0 | 32.1 | 22.8 | 6.70 | NA | *SANDY CLAY to SILTY CLAY |
| 34.5 | 44.7 | 31.4 | 6.26 | NA | *SANDY CLAY to SILTY CLAY |
| 35.0 | 43.7 | 30.5 | 6.50 | NA | *SANDY CLAY to SILTY CLAY |
| 35.5 | 30.1 | 20.8 | 8.91 | NA | *SANDY CLAY to SILTY CLAY |
| 36.0 | 43.1 | 29.5 | 7.34 | NA | *SANDY CLAY to SILTY CLAY |
| 36.5 | 52.7 | 35.7 | 8.36 | NA | *SANDY CLAY to SILTY CLAY |
| 37.0 | 40.9 | 27.5 | 8.64 | NA | *SANDY CLAY to SILTY CLAY |
| 37.5 | 32.1 | 21.4 | 7.24 | NA | *SANDY CLAY to SILTY CLAY |
| 38.0 | 31.7 | 20.9 | 6.05 | NA | SILTY CLAY TO CLAY |
| 38.5 | 29.4 | 19.3 | 5.73 | NA | SILTY CLAY TO CLAY |
| 39.0 | 33.5 | 21.7 | 5.35 | NA | SILTY CLAY TO CLAY |
| 39.5 | 31.0 | 20.0 | 5.70 | NA | SILTY CLAY TO CLAY |
| 40.0 | 46.4 | 29.6 | 5.36 | NA | *SANDY CLAY to SILTY CLAY |
| 40.5 | 39.8 | 25.2 | 6.69 | NA | *SANDY CLAY to SILTY CLAY |
| 41.0 | 57.4 | 36.0 | 5.24 | NA | *SANDY CLAY to SILTY CLAY |
| 41.5 | 44.3 | 27.6 | 5.63 | NA | *SANDY CLAY to SILTY CLAY |
| 42.0 | 48.5 | 29.9 | 6.14 | NA | *SANDY CLAY to SILTY CLAY |
| 42.5 | 50.3 | 30.8 | 5.62 | NA | *SANDY CLAY to SILTY CLAY |
| 43.0 | 87.4 | 53.1 | 5.64 | NA | *SANDY CLAY to SILTY CLAY |
| 43.5 | 100.6 | 60.5 | 4.52 | NA | *SANDY CLAY to SILTY CLAY |
| 44.0 | 169.2 | 101.0 | 2.75 | NA | SILTY SAND to SANDY SILT |
| 44.5 | 153.7 | 91.0 | 3.62 | NA | *CLAYEY SAND to SANDY CLAY |
| 45.0 | 155.8 | 91.5 | 4.07 | NA | *CLAYEY SAND to SANDY CLAY |

NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

MCK0002736

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| 45.5 | 250.0 | 145.6 | 2.54 | NA | SILTY SAND to SANDY SILT |
| 46.0 | 237.0 | 136.9 | 1.94 | NA | SILTY SAND to SANDY SILT |
| 46.5 | 140.0 | 80.2 | 3.42 | NA | *CLAYEY SAND to SANDY CLAY |
| 47.0 | 80.8 | 45.9 | 5.00 | NA | *SANDY CLAY to SILTY CLAY |
| 47.5 | 46.8 | 26.4 | 6.94 | NA | *SANDY CLAY to SILTY CLAY |
| 48.0 | 136.5 | 76.3 | 2.90 | NA | SANDY SILT to CLAYEY SILT |
| 48.5 | 142.5 | 79.0 | 2.57 | NA | SILTY SAND to SANDY SILT |
| 49.0 | 120.4 | 66.2 | 3.25 | NA | SANDY SILT to CLAYEY SILT |
| 49.5 | 91.7 | 50.0 | 5.12 | NA | *SANDY CLAY to SILTY CLAY |
| 50.0 | 142.0 | 76.9 | 2.51 | NA | SILTY SAND to SANDY SILT |
| 50.5 | 140.6 | 75.5 | 3.57 | NA | *CLAYEY SAND to SANDY CLAY |
| 51.0 | 247.6 | 131.9 | 1.80 | NA | SILTY SAND to SANDY SILT |
| 51.5 | 337.1 | 178.2 | 1.04 | NA | SAND to SILTY SAND |
| 52.0 | 362.0 | 189.8 | .81 | NA | SAND to SILTY SAND |
| 52.5 | 368.3 | 191.6 | .60 | NA | SAND to SILTY SAND |
| 53.0 | 383.8 | 198.1 | .64 | NA | SAND to SILTY SAND |
| 53.5 | 411.7 | 210.8 | .56 | NA | SAND to SILTY SAND |
| 54.0 | 330.9 | 168.1 | .74 | NA | SAND to SILTY SAND |
| 54.5 | 289.6 | 145.9 | .83 | NA | SAND to SILTY SAND |
| 55.0 | 292.9 | 146.4 | .83 | NA | SAND to SILTY SAND |
| 55.5 | 296.8 | 147.9 | .88 | NA | SAND to SILTY SAND |
| 56.0 | 308.8 | 153.3 | .88 | NA | SAND to SILTY SAND |
| 56.5 | 305.0 | 150.9 | .81 | NA | SAND to SILTY SAND |
| 57.0 | 336.8 | 166.0 | .94 | NA | SAND to SILTY SAND |
| 57.5 | 369.0 | 181.2 | .84 | NA | SAND to SILTY SAND |
| 58.0 | 348.2 | 170.4 | 1.12 | NA | SAND to SILTY SAND |
| 58.5 | 355.5 | 173.3 | .98 | NA | SAND to SILTY SAND |
| 59.0 | 427.5 | 207.7 | .69 | NA | SAND to SILTY SAND |
| 59.5 | 451.5 | 218.5 | .53 | NA | SANDY GRAVEL to SAND |
| 60.0 | 458.7 | 221.2 | .48 | NA | SANDY GRAVEL to SAND |
| 60.5 | 479.1 | 230.2 | .42 | NA | SANDY GRAVEL to SAND |
| 61.0 | 453.5 | 217.1 | .56 | NA | SAND to SILTY SAND |
| 61.5 | 424.9 | 202.7 | .41 | NA | SANDY GRAVEL to SAND |
| 62.0 | 417.7 | 198.6 | .31 | NA | SANDY GRAVEL to SAND |
| 62.5 | 430.4 | 203.9 | .64 | NA | SAND to SILTY SAND |
| 63.0 | 412.3 | 194.6 | .56 | NA | SAND to SILTY SAND |
| 63.5 | 405.3 | 190.6 | .68 | NA | SAND to SILTY SAND |
| 64.0 | 422.5 | 198.0 | 1.13 | NA | SAND to SILTY SAND |
| 64.5 | 392.1 | 183.1 | 1.33 | NA | SAND to SILTY SAND |
| 65.0 | 432.1 | 201.1 | .98 | NA | SAND to SILTY SAND |
| 65.5 | 424.5 | 196.8 | 1.00 | NA | SAND to SILTY SAND |

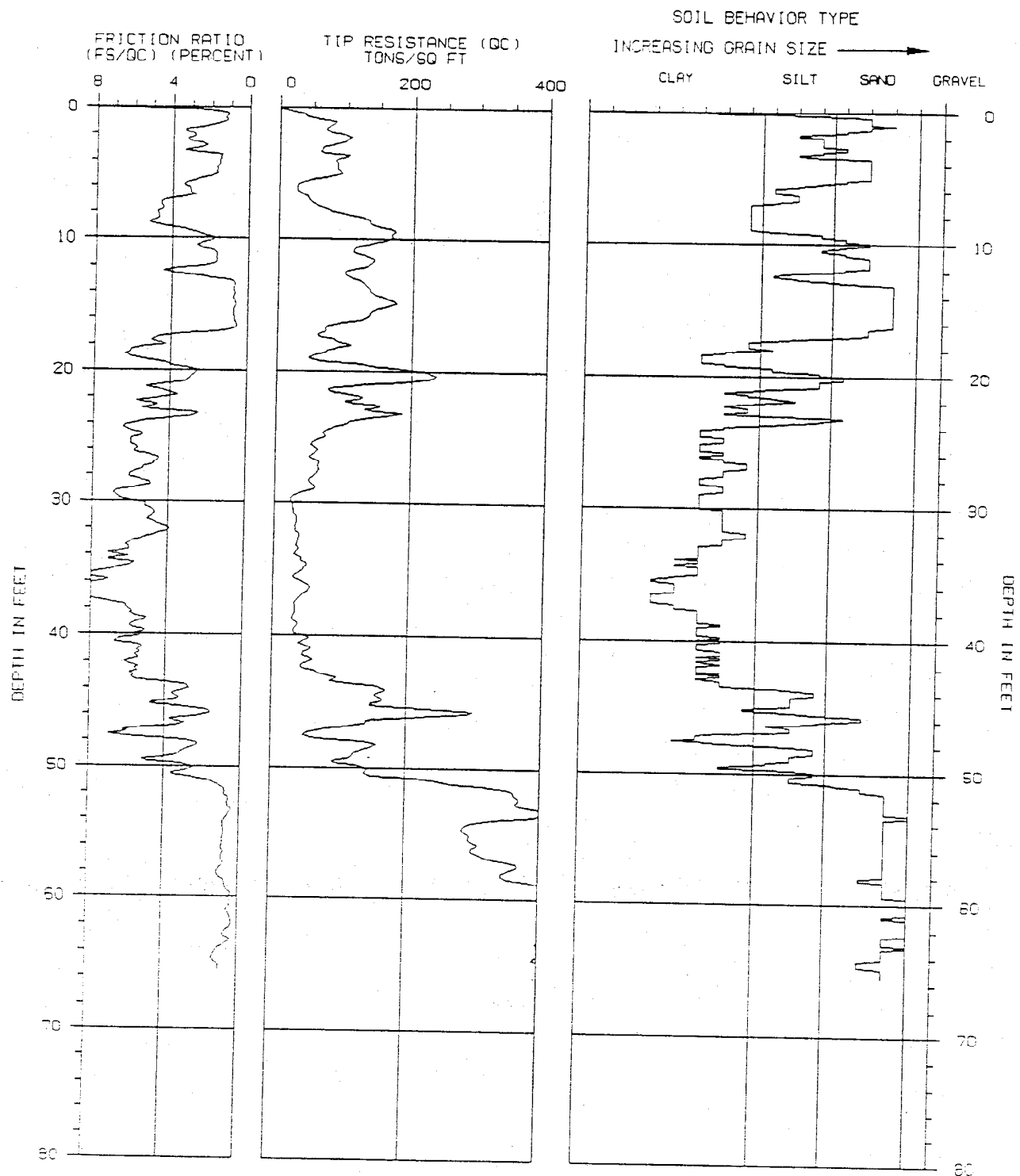
NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

MCK0002737



ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

CONE PENETRATION TEST


SOUNDING NUMBER: CPT-14

PROJECT NAME : HLA/MCKESSON-111

LOCATION : SANTA FE SPRGS

PROJECT NUMBER : 92-380-09502

DATE : 10-28-1991

 THE EARTH TECHNOLOGY CORPORATION

MCK0002738


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*   SOUNDING   : CPT-15                      PROJECT NO   : 92-380-09502
*   PROJECT    : HLA/MCKESSON-III            INSTRUMENT  : F15CKE091
*   LOCATION   : SANTA FE SPRGS              SYSTEM     : T-2
*   DATE       : 10-28-1991                  OPERATOR    : EC/MR
*
*
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| DEPTH | TIP RESISTANCE | NORMALIZED | FRICTION | CONE PORE | SOIL BEHAVIOR TYPE |
|-------|----------------|----------------|----------|-----------|----------------------------|
| (ft) | (tsf) | TIP RESISTANCE | RATIO | PRESSURE | |
| | | (tsf) | (%) | (tsf) | |
| 0.0 | 0.0 | 0.0 | 0.00 | NA | |
| 0.5 | 28.0 | 71.2 | 1.60 | NA | SILTY SAND to SANDY SILT |
| 1.0 | 23.6 | 52.8 | 3.72 | NA | SANDY SILT to CLAYEY SILT |
| 1.5 | 57.8 | 119.4 | 1.66 | NA | SAND to SILTY SAND |
| 2.0 | 74.0 | 143.5 | 4.07 | NA | *CLAYEY SAND to SANDY CLAY |
| 2.5 | 99.8 | 183.9 | 4.04 | NA | *CLAYEY SAND to SANDY CLAY |
| 3.0 | 85.1 | 150.1 | 4.37 | NA | *CLAYEY SAND to SANDY CLAY |
| 3.5 | 82.3 | 139.6 | 4.80 | NA | *SANDY CLAY to SILTY CLAY |
| 4.0 | 60.8 | 99.6 | 5.51 | NA | *SANDY CLAY to SILTY CLAY |
| 4.5 | 77.0 | 122.2 | 2.19 | NA | SILTY SAND to SANDY SILT |
| 5.0 | 39.0 | 60.2 | 4.49 | NA | *SANDY CLAY to SILTY CLAY |
| 5.5 | 30.2 | 45.3 | 4.60 | NA | *SANDY CLAY to SILTY CLAY |
| 6.0 | 26.4 | 38.6 | 4.89 | NA | *SANDY CLAY to SILTY CLAY |
| 6.5 | 21.5 | 30.7 | 5.69 | NA | *SANDY CLAY to SILTY CLAY |
| 7.0 | 18.6 | 25.9 | 5.84 | NA | *SANDY CLAY to SILTY CLAY |
| 7.5 | 16.5 | 22.5 | 6.45 | NA | *SANDY CLAY to SILTY CLAY |
| 8.0 | 25.4 | 34.0 | 5.51 | NA | *SANDY CLAY to SILTY CLAY |
| 8.5 | 50.4 | 66.0 | 4.64 | NA | *SANDY CLAY to SILTY CLAY |
| 9.0 | 44.0 | 56.6 | 6.41 | NA | *SANDY CLAY to SILTY CLAY |
| 9.5 | 46.8 | 59.1 | 6.21 | NA | *SANDY CLAY to SILTY CLAY |
| 10.0 | 53.0 | 65.8 | 6.65 | NA | *SANDY CLAY to SILTY CLAY |
| 10.5 | 53.7 | 65.4 | 5.60 | NA | *SANDY CLAY to SILTY CLAY |
| 11.0 | 49.4 | 59.3 | 6.12 | NA | *SANDY CLAY to SILTY CLAY |
| 11.5 | 59.7 | 70.4 | 3.81 | NA | *CLAYEY SAND to SANDY CLAY |
| 12.0 | 48.0 | 55.8 | 1.02 | NA | SAND to SILTY SAND |
| 12.5 | 53.4 | 61.1 | .70 | NA | SAND to SILTY SAND |
| 13.0 | 60.1 | 67.6 | .68 | NA | SAND to SILTY SAND |
| 13.5 | 75.6 | 84.0 | .56 | NA | SAND to SILTY SAND |
| 14.0 | 76.8 | 84.0 | .67 | NA | SAND to SILTY SAND |
| 14.5 | 74.4 | 80.3 | .72 | NA | SAND to SILTY SAND |
| 15.0 | 105.6 | 112.4 | .69 | NA | SAND to SILTY SAND |
| 15.5 | 128.3 | 134.8 | .68 | NA | SAND to SILTY SAND |
| 16.0 | 117.2 | 121.4 | .84 | NA | SAND to SILTY SAND |
| 16.5 | 107.8 | 110.3 | .78 | NA | SAND to SILTY SAND |
| 17.0 | 109.5 | 110.6 | .65 | NA | SAND to SILTY SAND |
| 17.5 | 128.3 | 128.0 | .68 | NA | SAND to SILTY SAND |
| 18.0 | 92.1 | 90.7 | .76 | NA | SAND to SILTY SAND |
| 18.5 | 55.4 | 53.9 | .79 | NA | SAND to SILTY SAND |
| 19.0 | 47.0 | 45.2 | .63 | NA | SAND to SILTY SAND |
| 19.5 | 57.8 | 55.0 | .62 | NA | SAND to SILTY SAND |
| 20.0 | 66.9 | 62.8 | .70 | NA | SAND to SILTY SAND |

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT. = 115 PCF
ASSUMED DEPTH OF WATER TABLE = 55.0 FT

The Earth Technology Corporation

SOUNDING : CPT-15

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| 20.5 | 68.1 | 63.2 | .81 | NA | SAND to SILTY SAND |
| 21.0 | 62.6 | 57.5 | .82 | NA | SAND to SILTY SAND |
| 21.5 | 90.5 | 82.2 | .72 | NA | SAND to SILTY SAND |
| 22.0 | 131.4 | 118.0 | .68 | NA | SAND to SILTY SAND |
| 22.5 | 219.2 | 194.7 | .76 | NA | SAND to SILTY SAND |
| 23.0 | 283.1 | 248.8 | 1.15 | NA | SAND to SILTY SAND |
| 23.5 | 290.9 | 252.8 | 1.17 | NA | SAND to SILTY SAND |
| 24.0 | 169.0 | 145.4 | 2.29 | NA | SILTY SAND to SANDY SILT |
| 24.5 | 64.0 | 54.4 | 4.48 | NA | *SANDY CLAY to SILTY CLAY |
| 25.0 | 55.4 | 46.7 | 3.38 | NA | SANDY SILT to CLAYEY SILT |
| 25.5 | 52.4 | 43.7 | 2.56 | NA | SANDY SILT to CLAYEY SILT |
| 26.0 | 89.6 | 73.9 | 2.94 | NA | SANDY SILT to CLAYEY SILT |
| 26.5 | 64.0 | 52.3 | 5.37 | NA | *SANDY CLAY to SILTY CLAY |
| 27.0 | 53.5 | 43.3 | 5.01 | NA | *SANDY CLAY to SILTY CLAY |
| 27.5 | 55.9 | 44.8 | 4.43 | NA | *SANDY CLAY to SILTY CLAY |
| 28.0 | 51.5 | 40.9 | 4.07 | NA | CLAYEY SILT to SILTY CLAY |
| 28.5 | 52.9 | 41.6 | 3.83 | NA | SANDY SILT to CLAYEY SILT |
| 29.0 | 51.5 | 40.1 | 3.61 | NA | SANDY SILT to CLAYEY SILT |
| 29.5 | 51.5 | 39.7 | 4.41 | NA | *SANDY CLAY to SILTY CLAY |
| 30.0 | 47.2 | 36.0 | 4.75 | NA | *SANDY CLAY to SILTY CLAY |
| 30.5 | 43.3 | 32.8 | 4.38 | NA | CLAYEY SILT to SILTY CLAY |
| 31.0 | 39.0 | 29.2 | 4.30 | NA | CLAYEY SILT to SILTY CLAY |
| 31.5 | 38.6 | 28.7 | 4.17 | NA | CLAYEY SILT to SILTY CLAY |
| 32.0 | 54.9 | 40.3 | 3.93 | NA | CLAYEY SILT to SILTY CLAY |
| 32.5 | 64.1 | 46.7 | 4.78 | NA | *SANDY CLAY to SILTY CLAY |
| 33.0 | 66.8 | 48.2 | 4.70 | NA | *SANDY CLAY to SILTY CLAY |
| 33.5 | 70.2 | 50.2 | 5.91 | NA | *SANDY CLAY to SILTY CLAY |
| 34.0 | 79.5 | 56.4 | 6.79 | NA | *SANDY CLAY to SILTY CLAY |
| 34.5 | 75.4 | 53.0 | 6.19 | NA | *SANDY CLAY to SILTY CLAY |
| 35.0 | 74.0 | 51.5 | 5.19 | NA | *SANDY CLAY to SILTY CLAY |
| 35.5 | 70.4 | 48.6 | 5.09 | NA | *SANDY CLAY to SILTY CLAY |
| 36.0 | 70.7 | 48.3 | 5.50 | NA | *SANDY CLAY to SILTY CLAY |
| 36.5 | 65.4 | 44.4 | 5.65 | NA | *SANDY CLAY to SILTY CLAY |
| 37.0 | 68.4 | 44.6 | 6.34 | NA | *SANDY CLAY to SILTY CLAY |
| 37.5 | 60.6 | 40.4 | 5.72 | NA | *SANDY CLAY to SILTY CLAY |
| 38.0 | 60.0 | 39.6 | 6.11 | NA | *SANDY CLAY to SILTY CLAY |
| 38.5 | 45.3 | 29.7 | 5.84 | NA | *SANDY CLAY to SILTY CLAY |
| 39.0 | 45.2 | 29.3 | 4.06 | NA | CLAYEY SILT to SILTY CLAY |
| 39.5 | 57.4 | 36.9 | 4.26 | NA | CLAYEY SILT to SILTY CLAY |
| 40.0 | 57.7 | 36.8 | 5.07 | NA | *SANDY CLAY to SILTY CLAY |
| 40.5 | 68.0 | 43.0 | 5.00 | NA | *SANDY CLAY to SILTY CLAY |
| 41.0 | 47.4 | 29.7 | 4.43 | NA | CLAYEY SILT to SILTY CLAY |
| 41.5 | 47.9 | 29.8 | 4.23 | NA | CLAYEY SILT to SILTY CLAY |
| 42.0 | 86.6 | 53.5 | 4.97 | NA | *SANDY CLAY to SILTY CLAY |
| 42.5 | 155.8 | 95.4 | 3.27 | NA | *CLAYEY SAND to SANDY CLAY |
| 43.0 | 131.0 | 79.5 | 3.99 | NA | *CLAYEY SAND to SANDY CLAY |
| 43.5 | 231.1 | 139.1 | 2.12 | NA | SILTY SAND to SANDY SILT |
| 44.0 | 223.2 | 133.2 | 2.55 | NA | SILTY SAND to SANDY SILT |
| 44.5 | 208.5 | 123.4 | 2.85 | NA | *SILTY SAND to CLAYEY SAND |
| 45.0 | 149.9 | 88.0 | 4.65 | NA | *SANDY CLAY to SILTY CLAY |

NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

MCK0002740

The Earth Technology
Corporation

SOUNDING : CPT-15

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|---------------------------|
| 45.5 | 193.4 | 112.6 | 2.45 | NA | SILTY SAND to SANDY SILT |
| 46.0 | 114.8 | 66.3 | 4.30 | NA | *SANDY CLAY to SILTY CLAY |
| 46.5 | 163.8 | 93.9 | 2.48 | NA | SILTY SAND to SANDY SILT |
| 47.0 | 162.7 | 92.4 | 2.20 | NA | SILTY SAND to SANDY SILT |
| 47.5 | 134.7 | 75.9 | 2.97 | NA | SANDY SILT to CLAYEY SILT |
| 48.0 | 153.5 | 85.8 | 2.08 | NA | SILTY SAND to SANDY SILT |
| 48.5 | 145.7 | 80.8 | 2.36 | NA | SILTY SAND to SANDY SILT |
| 49.0 | 153.7 | 84.6 | 2.35 | NA | SILTY SAND to SANDY SILT |
| 49.5 | 204.0 | 111.3 | 2.32 | NA | SILTY SAND to SANDY SILT |
| 50.0 | 325.6 | 176.3 | 1.22 | NA | SAND to SILTY SAND |
| 50.5 | 354.6 | 190.4 | 1.15 | NA | SAND to SILTY SAND |
| 51.0 | 328.6 | 175.1 | 1.02 | NA | SAND to SILTY SAND |
| 51.5 | 321.1 | 169.7 | .77 | NA | SAND to SILTY SAND |
| 52.0 | 336.4 | 176.4 | .70 | NA | SAND to SILTY SAND |
| 52.5 | 318.7 | 165.8 | .96 | NA | SAND to SILTY SAND |
| 53.0 | 333.2 | 171.9 | .94 | NA | SAND to SILTY SAND |
| 53.5 | 348.9 | 178.6 | .79 | NA | SAND to SILTY SAND |
| 54.0 | 417.5 | 212.1 | .70 | NA | SAND to SILTY SAND |
| 54.5 | 438.6 | 221.0 | .74 | NA | SAND to SILTY SAND |
| 55.0 | 427.9 | 213.9 | .61 | NA | SAND to SILTY SAND |
| 55.5 | 458.1 | 228.2 | .49 | NA | SANDY GRAVEL to SAND |
| 56.0 | 478.5 | 237.5 | .54 | NA | SANDY GRAVEL to SAND |
| 56.5 | 495.8 | 245.2 | .40 | NA | SANDY GRAVEL to SAND |
| 57.0 | 525.5 | 258.9 | .32 | NA | SANDY GRAVEL to SAND |
| 57.5 | 577.9 | 283.8 | .37 | NA | SANDY GRAVEL to SAND |
| 58.0 | 545.9 | 267.1 | .48 | NA | SANDY GRAVEL to SAND |
| 58.5 | 549.2 | 267.8 | .69 | NA | SANDY GRAVEL to SAND |
| 59.0 | 520.0 | 252.6 | .87 | NA | SAND to SILTY SAND |
| 59.5 | 515.6 | 249.6 | 1.07 | NA | SAND to SILTY SAND |
| 60.0 | 497.4 | 239.9 | 1.05 | NA | SAND to SILTY SAND |
| 60.5 | 479.2 | 230.3 | 1.10 | NA | SAND to SILTY SAND |
| 61.0 | 480.2 | 229.9 | 1.08 | NA | SAND to SILTY SAND |
| 61.5 | 459.3 | 219.1 | 1.13 | NA | SAND to SILTY SAND |
| 62.0 | 467.2 | 222.1 | 1.07 | NA | SAND to SILTY SAND |
| 62.5 | 483.2 | 228.9 | .94 | NA | SAND to SILTY SAND |
| 63.0 | 514.1 | 242.7 | .77 | NA | SAND to SILTY SAND |
| 63.5 | 520.0 | 244.6 | .62 | NA | SANDY GRAVEL to SAND |
| 64.0 | 494.8 | 231.9 | .58 | NA | SANDY GRAVEL to SAND |
| 64.5 | 419.2 | 195.7 | .41 | NA | SANDY GRAVEL to SAND |
| 65.0 | 384.4 | 178.8 | .35 | NA | SANDY GRAVEL to SAND |
| 65.5 | 431.1 | 199.8 | .31 | NA | SANDY GRAVEL to SAND |

NA = NOT APPLICABLE

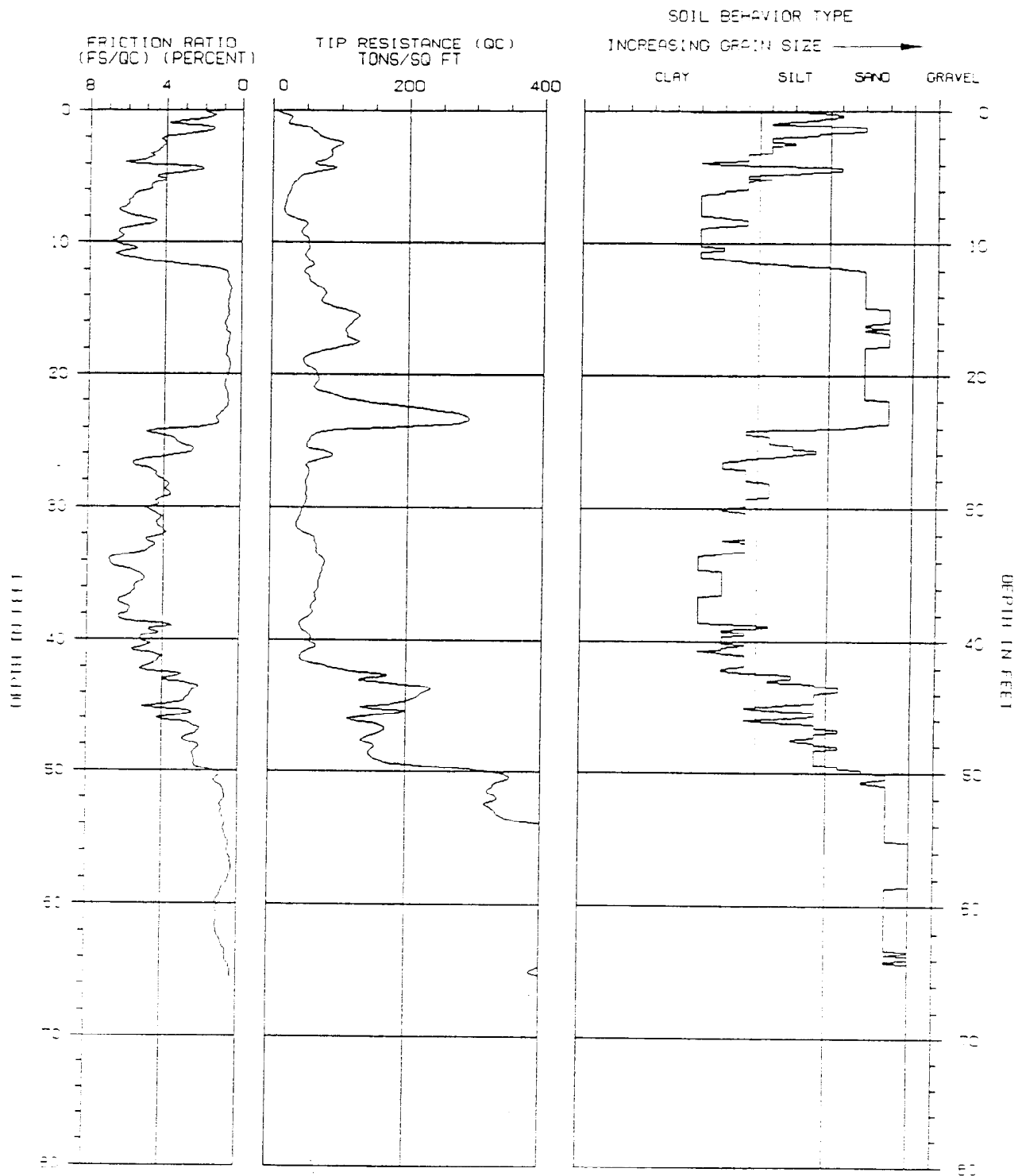
*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

MCK0002741

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Corporation



ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

CONE PENETRATION TEST


SOUNDING NUMBER: OPT-15

PROJECT NAME : HLA/MCKESSON-111

LOCATION : SANTA FE SPRGS

PROJECT NUMBER : 92-380-09502

DATE : 10-28-1991

 THE EARTH TECHNOLOGY CORPORATION

MCK0002742

 *
 * **CONE PENETRATION TEST** *
 *
 * SOUNDING : CPT-16 PROJECT NO : 92-380-09502 *
 * PROJECT : HLA/MCKESSON-III INSTRUMENT : F15CKE091 *
 * LOCATION : SANTA FE SPRGS SYSTEM : T-2 *
 * DATE : 10-28-1991 OPERATOR : EC/MR *
 *

 PAGE 1 of 3

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| 0.0 | 0.0 | 0.0 | 0.00 | NA | |
| 0.5 | 28.7 | 72.9 | 1.25 | NA | SAND to SILTY SAND |
| 1.0 | 27.1 | 60.7 | 1.73 | NA | SILTY SAND to SANDY SILT |
| 1.5 | 23.9 | 49.4 | 3.01 | NA | SANDY SILT to CLAYEY SILT |
| 2.0 | 19.5 | 37.8 | 3.73 | NA | SANDY SILT to CLAYEY SILT |
| 2.5 | 16.4 | 30.3 | 3.55 | NA | SANDY SILT to CLAYEY SILT |
| 3.0 | 12.9 | 22.8 | 5.50 | NA | SILTY CLAY to CLAY |
| 3.5 | 12.6 | 21.3 | 5.25 | NA | CLAYEY SILT to SILTY CLAY |
| 4.0 | 10.0 | 16.4 | 7.44 | NA | SILTY CLAY to CLAY |
| 4.5 | 9.0 | 14.3 | 7.96 | NA | CLAY to ORGANIC CLAY |
| 5.0 | 9.6 | 14.8 | 6.89 | NA | SILTY CLAY to CLAY |
| 5.5 | 21.8 | 32.7 | 4.28 | NA | CLAYEY SILT to SILTY CLAY |
| 6.0 | 44.1 | 64.5 | 5.80 | NA | *SANDY CLAY to SILTY CLAY |
| 6.5 | 52.0 | 74.3 | 6.71 | NA | *SANDY CLAY to SILTY CLAY |
| 7.0 | 71.5 | 99.7 | 5.85 | NA | *SANDY CLAY to SILTY CLAY |
| 7.5 | 69.4 | 94.8 | 7.13 | NA | *SANDY CLAY to SILTY CLAY |
| 8.0 | 52.4 | 70.1 | 7.29 | NA | *SANDY CLAY to SILTY CLAY |
| 8.5 | 89.5 | 117.3 | 5.02 | NA | *SANDY CLAY to SILTY CLAY |
| 9.0 | 113.9 | 146.5 | 2.78 | NA | *SILTY SAND to CLAYEY SAND |
| 9.5 | 98.6 | 124.5 | 1.88 | NA | SILTY SAND to SANDY SILT |
| 10.0 | 92.1 | 114.2 | .97 | NA | SAND to SILTY SAND |
| 10.5 | 78.4 | 95.5 | .93 | NA | SAND to SILTY SAND |
| 11.0 | 91.4 | 109.6 | .84 | NA | SAND to SILTY SAND |
| 11.5 | 155.0 | 182.9 | .86 | NA | SAND to SILTY SAND |
| 12.0 | 201.6 | 234.1 | .85 | NA | SAND to SILTY SAND |
| 12.5 | 252.9 | 289.2 | .85 | NA | SAND to SILTY SAND |
| 13.0 | 268.9 | 302.8 | 1.07 | NA | SAND to SILTY SAND |
| 13.5 | 258.5 | 287.0 | .84 | NA | SAND to SILTY SAND |
| 14.0 | 289.7 | 317.0 | .82 | NA | SAND to SILTY SAND |
| 14.5 | 293.0 | 316.1 | 1.07 | NA | SAND to SILTY SAND |
| 15.0 | 262.4 | 279.2 | 1.15 | NA | SAND to SILTY SAND |
| 15.5 | 225.5 | 236.8 | 1.11 | NA | SAND to SILTY SAND |
| 16.0 | 228.7 | 237.0 | .99 | NA | SAND to SILTY SAND |
| 16.5 | 294.2 | 300.9 | .76 | NA | SANDY GRAVEL to SAND |
| 17.0 | 265.2 | 267.8 | .84 | NA | SAND to SILTY SAND |
| 17.5 | 270.4 | 269.7 | .70 | NA | SAND to SILTY SAND |
| 18.0 | 290.7 | 286.4 | .71 | NA | SANDY GRAVEL to SAND |
| 18.5 | 296.3 | 288.4 | .72 | NA | SANDY GRAVEL to SAND |
| 19.0 | 284.8 | 273.8 | .91 | NA | SAND to SILTY SAND |
| 19.5 | 274.3 | 260.7 | .95 | NA | SAND to SILTY SAND |
| 20.0 | 286.9 | 269.5 | .73 | NA | SAND to SILTY SAND |

NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

MCK0002743

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 Corporation*

SOUNDING : CPT-16

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| 20.5 | 145.2 | 134.8 | 2.10 | NA | SILTY SAND to SANDY SILT |
| 21.0 | 103.2 | 94.7 | 2.83 | NA | SILTY SAND to SANDY SILT |
| 21.5 | 74.2 | 67.3 | 4.52 | NA | *SANDY CLAY to SILTY CLAY |
| 22.0 | 64.3 | 57.7 | 4.93 | NA | *SANDY CLAY to SILTY CLAY |
| 22.5 | 40.4 | 35.9 | 3.82 | NA | SANDY SILT to CLAYEY SILT |
| 23.0 | 47.0 | 41.3 | 3.02 | NA | SANDY SILT to CLAYEY SILT |
| 23.5 | 68.2 | 59.3 | 4.32 | NA | *SANDY CLAY to SILTY CLAY |
| 24.0 | 62.9 | 54.1 | 4.33 | NA | *SANDY CLAY to SILTY CLAY |
| 24.5 | 54.1 | 46.0 | 4.14 | NA | *SANDY CLAY to SILTY CLAY |
| 25.0 | 62.2 | 52.4 | 3.59 | NA | SANDY SILT to CLAYEY SILT |
| 25.5 | 62.3 | 52.0 | 4.34 | NA | *SANDY CLAY to SILTY CLAY |
| 26.0 | 44.5 | 36.8 | 4.92 | NA | *SANDY CLAY to SILTY CLAY |
| 26.5 | 30.5 | 24.9 | 4.99 | NA | CLAYEY SILT to SILTY CLAY |
| 27.0 | 27.5 | 22.3 | 5.62 | NA | SILTY CLAY to CLAY |
| 27.5 | 18.6 | 14.9 | 6.47 | NA | SILTY CLAY to CLAY |
| 28.0 | 21.7 | 17.2 | 4.90 | NA | CLAYEY SILT to SILTY CLAY |
| 28.5 | 24.8 | 19.5 | 4.85 | NA | CLAYEY SILT to SILTY CLAY |
| 29.0 | 23.1 | 18.0 | 4.86 | NA | CLAYEY SILT to SILTY CLAY |
| 29.5 | 32.6 | 25.1 | 4.34 | NA | CLAYEY SILT to SILTY CLAY |
| 30.0 | 43.5 | 33.2 | 5.75 | NA | *SANDY CLAY to SILTY CLAY |
| 30.5 | 47.8 | 36.2 | 5.90 | NA | *SANDY CLAY to SILTY CLAY |
| 31.0 | 50.8 | 38.1 | 5.49 | NA | *SANDY CLAY to SILTY CLAY |
| 31.5 | 47.3 | 35.1 | 4.57 | NA | CLAYEY SILT to SILTY CLAY |
| 32.0 | 43.6 | 32.0 | 4.94 | NA | *SANDY CLAY to SILTY CLAY |
| 32.5 | 48.4 | 35.3 | 4.33 | NA | CLAYEY SILT to SILTY CLAY |
| 33.0 | 57.0 | 41.1 | 4.99 | NA | *SANDY CLAY to SILTY CLAY |
| 33.5 | 49.5 | 35.4 | 6.28 | NA | *SANDY CLAY to SILTY CLAY |
| 34.0 | 54.5 | 38.6 | 6.15 | NA | *SANDY CLAY to SILTY CLAY |
| 34.5 | 51.1 | 35.9 | 7.76 | NA | *SANDY CLAY to SILTY CLAY |
| 35.0 | 38.5 | 26.8 | 7.34 | NA | *SANDY CLAY to SILTY CLAY |
| 35.5 | 35.9 | 24.8 | 6.20 | NA | *SANDY CLAY to SILTY CLAY |
| 36.0 | 33.5 | 22.9 | 6.05 | NA | SILTY CLAY to CLAY |
| 36.5 | 30.5 | 20.7 | 4.44 | NA | CLAYEY SILT to SILTY CLAY |
| 37.0 | 68.5 | 46.0 | 5.45 | NA | *SANDY CLAY to SILTY CLAY |
| 37.5 | 40.8 | 27.2 | 6.90 | NA | *SANDY CLAY to SILTY CLAY |
| 38.0 | 62.7 | 41.4 | 5.65 | NA | *SANDY CLAY to SILTY CLAY |
| 38.5 | 77.9 | 51.0 | 6.27 | NA | *SANDY CLAY to SILTY CLAY |
| 39.0 | 83.8 | 54.4 | 5.34 | NA | *SANDY CLAY to SILTY CLAY |
| 39.5 | 62.7 | 40.3 | 6.68 | NA | *SANDY CLAY to SILTY CLAY |
| 40.0 | 111.6 | 71.3 | 4.16 | NA | *CLAYEY SAND to SANDY CLAY |
| 40.5 | 169.2 | 107.1 | 3.46 | NA | *CLAYEY SAND to SANDY CLAY |
| 41.0 | 177.6 | 111.5 | 2.73 | NA | SILTY SAND to SANDY SILT |
| 41.5 | 146.8 | 91.3 | 3.91 | NA | *CLAYEY SAND to SANDY CLAY |
| 42.0 | 157.3 | 97.1 | 3.15 | NA | *CLAYEY SAND to SANDY CLAY |
| 42.5 | 191.5 | 117.2 | 2.60 | NA | SILTY SAND to SANDY SILT |
| 43.0 | 180.8 | 109.7 | 2.54 | NA | SILTY SAND to SANDY SILT |
| 43.5 | 154.4 | 92.9 | 2.53 | NA | SILTY SAND to SANDY SILT |
| 44.0 | 156.0 | 93.1 | 2.75 | NA | SILTY SAND to SANDY SILT |
| 44.5 | 211.3 | 125.1 | 2.08 | NA | SILTY SAND to SANDY SILT |
| 45.0 | 254.7 | 149.5 | 1.73 | NA | SAND to SILTY SAND |

NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

MCK0002744

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Corporation

SOUNDING : CPT-16

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------|
| 45.5 | 291.8 | 169.9 | 1.66 | NA | SAND to SILTY SAND |
| 46.0 | 288.5 | 166.6 | 1.42 | NA | SAND to SILTY SAND |
| 46.5 | 247.9 | 142.0 | 1.32 | NA | SAND to SILTY SAND |
| 47.0 | 253.8 | 144.2 | 1.18 | NA | SAND to SILTY SAND |
| 47.5 | 259.7 | 146.4 | 1.57 | NA | SAND to SILTY SAND |
| 48.0 | 304.8 | 170.4 | 1.11 | NA | SAND to SILTY SAND |
| 48.5 | 360.9 | 200.1 | .90 | NA | SAND to SILTY SAND |
| 49.0 | 328.0 | 180.5 | 1.28 | NA | SAND to SILTY SAND |
| 49.5 | 305.4 | 166.6 | 1.17 | NA | SAND to SILTY SAND |
| 50.0 | 328.7 | 178.0 | .83 | NA | SAND to SILTY SAND |
| 50.5 | 342.6 | 184.0 | .88 | NA | SAND to SILTY SAND |
| 51.0 | 350.0 | 186.5 | .79 | NA | SAND to SILTY SAND |
| 51.5 | 336.7 | 177.9 | 1.27 | NA | SAND to SILTY SAND |
| 52.0 | 352.2 | 184.7 | 1.22 | NA | SAND to SILTY SAND |
| 52.5 | 366.3 | 190.5 | 1.00 | NA | SAND to SILTY SAND |
| 53.0 | 388.2 | 200.4 | .49 | NA | SANDY GRAVEL to SAND |
| 53.5 | 399.2 | 204.4 | .58 | NA | SAND to SILTY SAND |
| 54.0 | 433.1 | 220.0 | .46 | NA | SANDY GRAVEL to SAND |
| 54.5 | 454.0 | 228.8 | .43 | NA | SANDY GRAVEL to SAND |
| 55.0 | 491.2 | 245.6 | .41 | NA | SANDY GRAVEL to SAND |
| 55.5 | 520.2 | 259.2 | .27 | NA | SANDY GRAVEL to SAND |

NA = NOT APPLICABLE

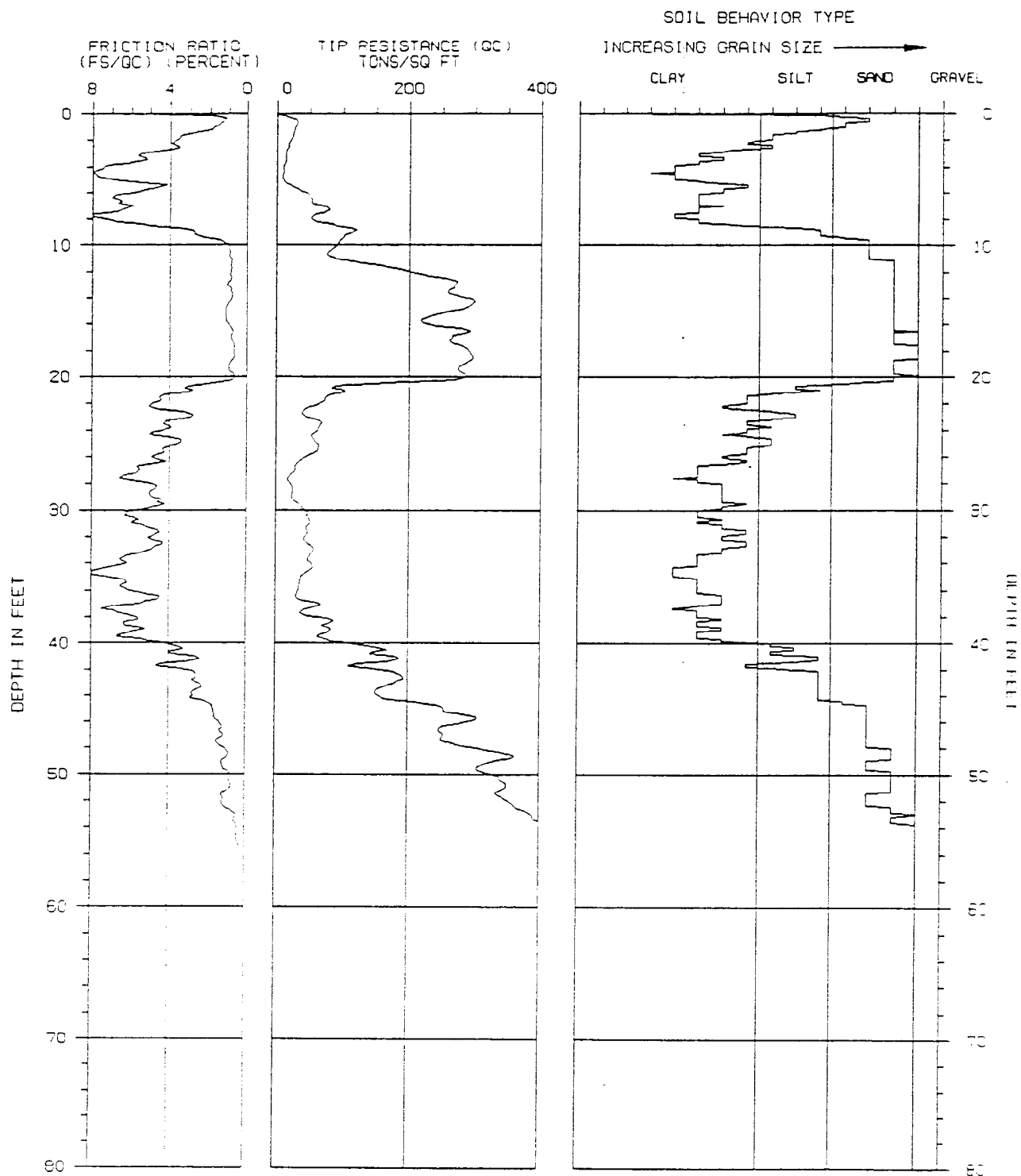
*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

MCK0002745

*The Earth Technology
Corporation*



ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-16

PROJECT NAME : HLA/MCKESSON-111

LOCATION : SANTA FE SPRGS

PROJECT NUMBER : 92-380-09502

DATE : 10-28-1991



THE EARTH TECHNOLOGY CORPORATION

MCK0002746

 *
 * **CONE PENETRATION TEST** *
 *
 * SOUNDING : CPT-17 PROJECT NO : 92-380-09502 *
 * PROJECT : HLA/MCKESSON-III INSTRUMENT : F15CKE091 *
 * LOCATION : SANTA FE SPRGS SYSTEM : T-2 *
 * DATE : 10-29-1991 OPERATOR : EC/MR *
 *

PAGE 1 of 3

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|---------------------------|
| .0 | .0 | .0 | .00 | NA | |
| .5 | 33.7 | 85.5 | 1.83 | NA | SILTY SAND to SANDY SILT |
| 1.0 | 46.8 | 104.9 | 2.86 | NA | SILTY SAND to SANDY SILT |
| 1.5 | 27.1 | 56.0 | 5.40 | NA | *SANDY CLAY to SILTY CLAY |
| 2.0 | 19.9 | 38.6 | 5.76 | NA | *SANDY CLAY to SILTY CLAY |
| 2.5 | 16.9 | 31.1 | 5.98 | NA | *SANDY CLAY to SILTY CLAY |
| 3.0 | 14.5 | 25.5 | 6.18 | NA | *SANDY CLAY to SILTY CLAY |
| 3.5 | 14.3 | 24.3 | 5.11 | NA | CLAYEY SILT to SILTY CLAY |
| 4.0 | 14.1 | 23.2 | 5.42 | NA | SILTY CLAY to CLAY |
| 4.5 | 12.4 | 19.7 | 4.60 | NA | CLAYEY SILT to SILTY CLAY |
| 5.0 | 15.2 | 23.5 | 4.35 | NA | CLAYEY SILT to SILTY CLAY |
| 5.5 | 18.0 | 27.0 | 4.71 | NA | CLAYEY SILT to SILTY CLAY |
| 6.0 | 32.8 | 47.9 | 3.78 | NA | SANDY SILT to CLAYEY SILT |
| 6.5 | 50.4 | 72.0 | 5.21 | NA | *SANDY CLAY to SILTY CLAY |
| 7.0 | 53.4 | 74.5 | 6.27 | NA | *SANDY CLAY to SILTY CLAY |
| 7.5 | 82.7 | 113.0 | 4.80 | NA | *SANDY CLAY to SILTY CLAY |
| 8.0 | 73.1 | 97.8 | 4.76 | NA | *SANDY CLAY to SILTY CLAY |
| 8.5 | 80.4 | 105.4 | 5.43 | NA | *SANDY CLAY to SILTY CLAY |
| 9.0 | 80.6 | 103.7 | 4.78 | NA | *SANDY CLAY to SILTY CLAY |
| 9.5 | 95.8 | 120.9 | 1.69 | NA | SAND to SILTY SAND |
| 10.0 | 96.1 | 119.2 | .80 | NA | SAND to SILTY SAND |
| 10.5 | 113.4 | 138.2 | .87 | NA | SAND to SILTY SAND |
| 11.0 | 202.7 | 243.0 | .71 | NA | SAND to SILTY SAND |
| 11.5 | 240.0 | 293.1 | .95 | NA | SAND to SILTY SAND |
| 12.0 | 230.0 | 267.1 | 1.03 | NA | SAND to SILTY SAND |
| 12.5 | 240.2 | 274.7 | 1.04 | NA | SAND to SILTY SAND |
| 13.0 | 251.7 | 293.5 | .94 | NA | SAND to SILTY SAND |
| 13.5 | 261.7 | 290.5 | .79 | NA | SAND to SILTY SAND |
| 14.0 | 258.3 | 282.7 | .81 | NA | SAND to SILTY SAND |
| 14.5 | 274.5 | 296.1 | .73 | NA | SANDY GRAVEL to SAND |
| 15.0 | 241.1 | 256.6 | .76 | NA | SAND to SILTY SAND |
| 15.5 | 189.8 | 199.3 | .86 | NA | SAND to SILTY SAND |
| 16.0 | 188.1 | 194.9 | .73 | NA | SAND to SILTY SAND |
| 16.5 | 183.4 | 187.6 | .62 | NA | SAND to SILTY SAND |
| 17.0 | 198.6 | 200.6 | .60 | NA | SAND to SILTY SAND |
| 17.5 | 210.2 | 209.6 | .72 | NA | SAND to SILTY SAND |
| 18.0 | 242.1 | 238.5 | .73 | NA | SAND to SILTY SAND |
| 18.5 | 250.7 | 244.0 | .83 | NA | SAND to SILTY SAND |
| 19.0 | 232.8 | 223.9 | .82 | NA | SAND to SILTY SAND |
| 19.5 | 281.4 | 267.4 | .71 | NA | SAND to SILTY SAND |
| 20.0 | 290.1 | 272.4 | .67 | NA | SANDY GRAVEL to SAND |

NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

MCK0002747

The Earth Technology
Corporation

SOUNDING : CPT-17

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| 20.5 | 196.9 | 182.8 | 1.68 | NA | SAND to SILTY SAND |
| 21.0 | 85.4 | 78.4 | 3.57 | NA | *CLAYEY SAND to SANDY CLAY |
| 21.5 | 72.3 | 65.7 | 3.05 | NA | SANDY SILT to CLAYEY SILT |
| 22.0 | 59.7 | 53.6 | 2.66 | NA | SANDY SILT to CLAYEY SILT |
| 22.5 | 56.1 | 49.9 | 2.53 | NA | SANDY SILT to CLAYEY SILT |
| 23.0 | 70.0 | 61.5 | 3.54 | NA | SANDY SILT to CLAYEY SILT |
| 23.5 | 66.8 | 58.1 | 3.46 | NA | SANDY SILT to CLAYEY SILT |
| 24.0 | 58.8 | 50.6 | 2.88 | NA | SANDY SILT to CLAYEY SILT |
| 24.5 | 62.1 | 52.8 | 3.04 | NA | SANDY SILT to CLAYEY SILT |
| 25.0 | 59.7 | 50.3 | 2.28 | NA | SILTY SAND to SANDY SILT |
| 25.5 | 61.6 | 51.4 | 3.30 | NA | SANDY SILT to CLAYEY SILT |
| 26.0 | 65.1 | 53.7 | 3.04 | NA | SANDY SILT to CLAYEY SILT |
| 26.5 | 61.3 | 50.1 | 3.41 | NA | SANDY SILT to CLAYEY SILT |
| 27.0 | 56.3 | 45.5 | 3.68 | NA | SANDY SILT to CLAYEY SILT |
| 27.5 | 43.2 | 34.6 | 3.90 | NA | CLAYEY SILT to SILTY CLAY |
| 28.0 | 46.9 | 37.2 | 3.38 | NA | SANDY SILT to CLAYEY SILT |
| 28.5 | 33.6 | 26.4 | 4.26 | NA | CLAYEY SILT to SILTY CLAY |
| 29.0 | 23.9 | 18.6 | 4.32 | NA | CLAYEY SILT to SILTY CLAY |
| 29.5 | 29.3 | 22.6 | 3.64 | NA | CLAYEY SILT to SILTY CLAY |
| 30.0 | 33.0 | 25.2 | 3.22 | NA | SANDY SILT to CLAYEY SILT |
| 30.5 | 38.4 | 29.0 | 3.36 | NA | SANDY SILT to CLAYEY SILT |
| 31.0 | 44.3 | 33.2 | 3.25 | NA | SANDY SILT to CLAYEY SILT |
| 31.5 | 48.7 | 36.1 | 3.62 | NA | SANDY SILT to CLAYEY SILT |
| 32.0 | 38.1 | 28.0 | 3.32 | NA | SANDY SILT to CLAYEY SILT |
| 32.5 | 48.9 | 35.7 | 3.35 | NA | SANDY SILT to CLAYEY SILT |
| 33.0 | 67.4 | 48.6 | 5.48 | NA | *SANDY CLAY to SILTY CLAY |
| 33.5 | 76.9 | 55.0 | 6.50 | NA | *SANDY CLAY to SILTY CLAY |
| 34.0 | 59.1 | 41.9 | 8.11 | NA | *SANDY CLAY to SILTY CLAY |
| 34.5 | 39.3 | 27.6 | 7.69 | NA | *SANDY CLAY to SILTY CLAY |
| 35.0 | 33.2 | 23.1 | 6.80 | NA | *SANDY CLAY to SILTY CLAY |
| 35.5 | 36.6 | 25.2 | 6.26 | NA | *SANDY CLAY to SILTY CLAY |
| 36.0 | 37.3 | 25.5 | 5.96 | NA | *SANDY CLAY to SILTY CLAY |
| 36.5 | 34.2 | 23.2 | 5.25 | NA | CLAYEY SILT to SILTY CLAY |
| 37.0 | 33.7 | 22.7 | 5.01 | NA | CLAYEY SILT to SILTY CLAY |
| 37.5 | 33.5 | 22.3 | 4.63 | NA | CLAYEY SILT to SILTY CLAY |
| 38.0 | 35.7 | 23.6 | 4.42 | NA | CLAYEY SILT to SILTY CLAY |
| 38.5 | 32.5 | 21.3 | 4.62 | NA | CLAYEY SILT to SILTY CLAY |
| 39.0 | 33.0 | 21.4 | 5.00 | NA | CLAYEY SILT to SILTY CLAY |
| 39.5 | 99.8 | 64.3 | 4.37 | NA | *SANDY CLAY to SILTY CLAY |
| 40.0 | 81.9 | 52.3 | 5.49 | NA | *SANDY CLAY to SILTY CLAY |
| 40.5 | 61.8 | 39.1 | 6.24 | NA | *SANDY CLAY to SILTY CLAY |
| 41.0 | 55.7 | 34.9 | 6.18 | NA | *SANDY CLAY to SILTY CLAY |
| 41.5 | 58.0 | 36.1 | 6.93 | NA | *SANDY CLAY to SILTY CLAY |
| 42.0 | 100.2 | 61.8 | 5.46 | NA | *SANDY CLAY to SILTY CLAY |
| 42.5 | 132.4 | 81.0 | 4.34 | NA | *SANDY CLAY to SILTY CLAY |
| 43.0 | 114.6 | 69.6 | 5.25 | NA | *SANDY CLAY to SILTY CLAY |
| 43.5 | 73.7 | 44.3 | 6.80 | NA | *SANDY CLAY to SILTY CLAY |
| 44.0 | 95.7 | 57.1 | 5.72 | NA | *SANDY CLAY to SILTY CLAY |
| 44.5 | 137.0 | 81.1 | 4.10 | NA | *CLAYEY SAND to SANDY CLAY |
| 45.0 | 197.8 | 116.1 | 2.73 | NA | SILTY SAND to SANDY SILT |

NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

MCK0002748

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|--------------------------|
| 45.5 | 237.6 | 138.3 | 2.25 | NA | SILTY SAND to SANDY SILT |
| 46.0 | 187.4 | 108.2 | 2.67 | NA | SILTY SAND to SANDY SILT |
| 46.5 | 196.2 | 112.4 | 2.70 | NA | SILTY SAND to SANDY SILT |
| 47.0 | 250.7 | 142.5 | 1.29 | NA | SAND to SILTY SAND |
| 47.5 | 269.6 | 151.9 | 1.48 | NA | SAND to SILTY SAND |
| 48.0 | 237.8 | 132.9 | 1.54 | NA | SAND to SILTY SAND |
| 48.5 | 322.1 | 178.6 | 1.72 | NA | SAND to SILTY SAND |
| 49.0 | 325.0 | 178.8 | 1.23 | NA | SAND to SILTY SAND |
| 49.5 | 347.5 | 189.6 | 1.03 | NA | SAND to SILTY SAND |
| 50.0 | 324.9 | 175.9 | 1.07 | NA | SAND to SILTY SAND |
| 50.5 | 318.5 | 171.0 | 1.05 | NA | SAND to SILTY SAND |
| 51.0 | 334.4 | 178.2 | .85 | NA | SAND to SILTY SAND |
| 51.5 | 451.1 | 238.4 | .68 | NA | SAND to SILTY SAND |
| 52.0 | 465.2 | 243.9 | .64 | NA | SAND to SILTY SAND |
| 52.5 | 459.0 | 238.8 | .58 | NA | SANDY GRAVEL to SAND |
| 53.0 | 457.9 | 236.3 | .61 | NA | SAND to SILTY SAND |
| 53.5 | 434.3 | 222.3 | .64 | NA | SAND to SILTY SAND |
| 54.0 | 454.4 | 230.8 | .44 | NA | SANDY GRAVEL to SAND |
| 54.5 | 425.5 | 214.4 | .54 | NA | SANDY GRAVEL to SAND |
| 55.0 | 428.8 | 214.4 | .62 | NA | SAND to SILTY SAND |
| 55.5 | 431.1 | 214.8 | .76 | NA | SAND to SILTY SAND |
| 56.0 | 418.4 | 207.7 | .64 | NA | SAND to SILTY SAND |
| 56.5 | 394.0 | 194.8 | .73 | NA | SAND to SILTY SAND |
| 57.0 | 411.5 | 202.8 | .74 | NA | SAND to SILTY SAND |
| 57.5 | 450.0 | 221.0 | .81 | NA | SAND to SILTY SAND |

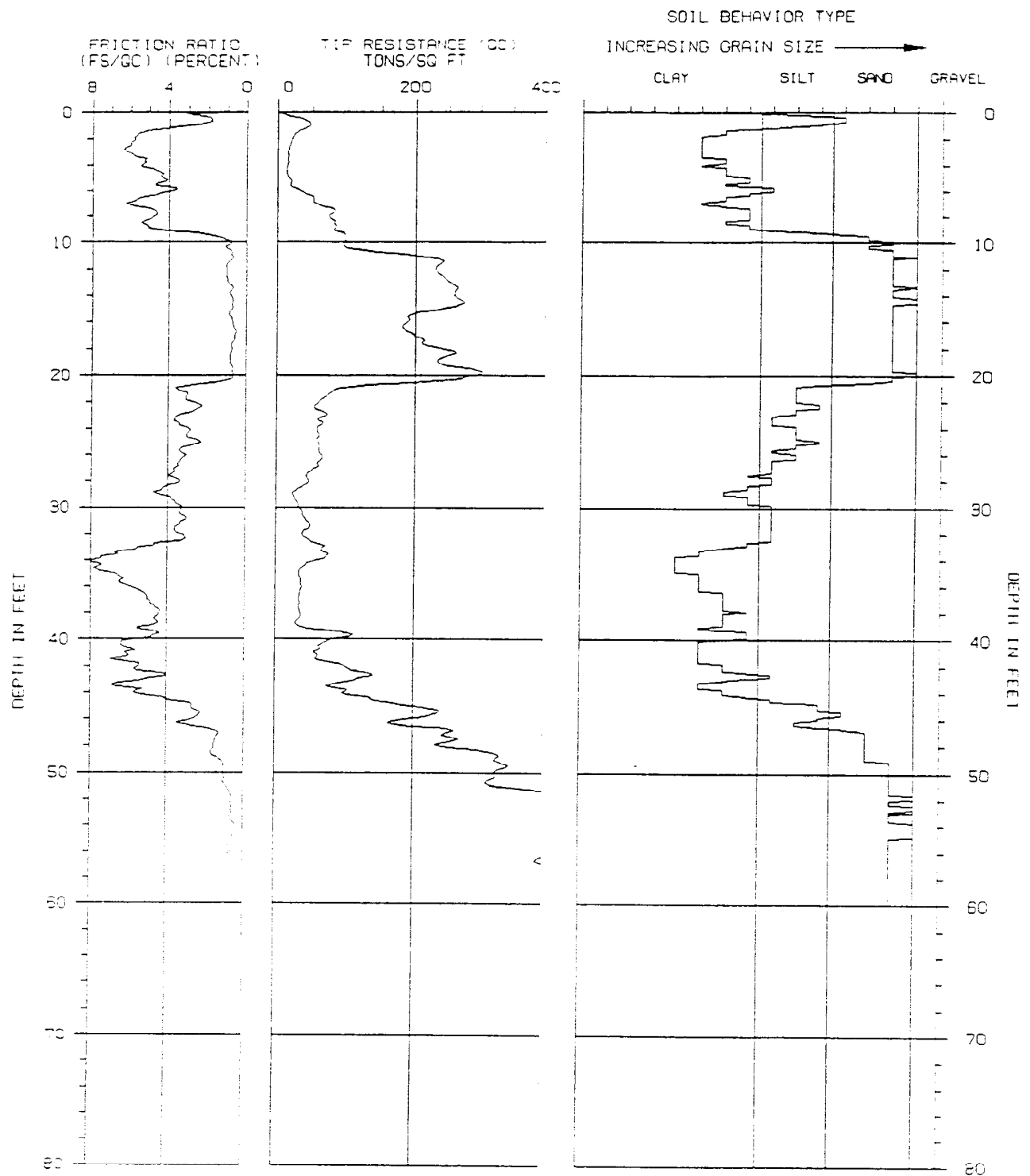
NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

MCK0002749



ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

CONE PENETRATION TEST


SOUNDING NUMBER: CPT-17

PROJECT NAME : HLA/MCKESSON-111

LOCATION : SANTA FE SPRINGS

PROJECT NUMBER : 92-360-08502

DATE : 10-29-1991

 THE EARTH TECHNOLOGY CORPORATION

MCK0002750

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*                               *
*                               *
*                               *
* SOUNDING : CPT-18            PROJECT NO : 92-380-09502 *
* PROJECT   : HLA/MCKESSON-III INSTRUMENT  : F15CKE091  *
* LOCATION  : SANTA FE SPRGS  SYSTEM      : T-2         *
* DATE      : 10-29-1991      OPERATOR    : EC/MR        *
*
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PAGE 1 of 3

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| 0.0 | 0.0 | 0.0 | 0.00 | NA | |
| 0.5 | 63.4 | 161.1 | 1.53 | NA | SAND to SILTY SAND |
| 1.0 | 54.8 | 122.9 | 1.81 | NA | SILTY SAND to SANDY SILT |
| 1.5 | 68.5 | 141.4 | 3.64 | NA | *CLAYEY SAND to SANDY CLAY |
| 2.0 | 75.3 | 146.0 | 3.56 | NA | *CLAYEY SAND to SANDY CLAY |
| 2.5 | 41.0 | 75.6 | 6.73 | NA | *SANDY CLAY to SILTY CLAY |
| 3.0 | 40.6 | 71.6 | 7.84 | NA | *SANDY CLAY to SILTY CLAY |
| 3.5 | 51.3 | 86.9 | 7.36 | NA | *SANDY CLAY to SILTY CLAY |
| 4.0 | 54.4 | 89.1 | 7.56 | NA | *SANDY CLAY to SILTY CLAY |
| 4.5 | 44.1 | 70.1 | 5.30 | NA | *SANDY CLAY to SILTY CLAY |
| 5.0 | 37.1 | 57.2 | 3.58 | NA | SANDY SILT to CLAYEY SILT |
| 5.5 | 33.2 | 49.8 | 1.36 | NA | SILTY SAND to SANDY SILT |
| 6.0 | 47.7 | 69.7 | 1.05 | NA | SAND to SILTY SAND |
| 6.5 | 125.1 | 178.5 | 1.08 | NA | SAND to SILTY SAND |
| 7.0 | 213.8 | 298.3 | .80 | NA | SAND to SILTY SAND |
| 7.5 | 222.0 | 303.1 | .89 | NA | SAND to SILTY SAND |
| 8.0 | 202.8 | 271.2 | .93 | NA | SAND to SILTY SAND |
| 8.5 | 250.6 | 328.5 | 1.01 | NA | SAND to SILTY SAND |
| 9.0 | 305.2 | 392.5 | .84 | NA | SANDY GRAVEL to SAND |
| 9.5 | 325.5 | 410.9 | 1.02 | NA | SAND to SILTY SAND |
| 10.0 | 323.1 | 400.7 | .67 | NA | SANDY GRAVEL to SAND |
| 10.5 | 326.0 | 397.4 | .81 | NA | SANDY GRAVEL to SAND |
| 11.0 | 337.6 | 404.8 | .89 | NA | SANDY GRAVEL to SAND |
| 11.5 | 297.8 | 351.3 | .81 | NA | SANDY GRAVEL to SAND |
| 12.0 | 287.9 | 334.2 | .65 | NA | SANDY GRAVEL to SAND |
| 12.5 | 296.3 | 338.8 | .64 | NA | SANDY GRAVEL to SAND |
| 13.0 | 284.3 | 320.3 | .54 | NA | SANDY GRAVEL to SAND |
| 13.5 | 311.9 | 346.2 | .71 | NA | SANDY GRAVEL to SAND |
| 14.0 | 319.4 | 349.5 | .69 | NA | SANDY GRAVEL to SAND |
| 14.5 | 317.6 | 342.7 | .73 | NA | SANDY GRAVEL to SAND |
| 15.0 | 297.7 | 316.8 | .75 | NA | SANDY GRAVEL to SAND |
| 15.5 | 344.7 | 361.9 | .69 | NA | SANDY GRAVEL to SAND |
| 16.0 | 341.3 | 353.7 | .76 | NA | SANDY GRAVEL to SAND |
| 16.5 | 347.4 | 355.3 | .60 | NA | SANDY GRAVEL to SAND |
| 17.0 | 371.3 | 375.0 | .61 | NA | SANDY GRAVEL to SAND |
| 17.5 | 342.6 | 341.7 | .66 | NA | SANDY GRAVEL to SAND |
| 18.0 | 449.5 | 442.7 | .66 | NA | SANDY GRAVEL to SAND |
| 18.5 | 497.6 | 484.3 | .78 | NA | SANDY GRAVEL to SAND |
| 19.0 | 437.9 | 421.1 | .95 | NA | SAND to SILTY SAND |
| 19.5 | 402.9 | 382.9 | .84 | NA | SANDY GRAVEL to SAND |
| 20.0 | 361.4 | 339.5 | .86 | NA | SAND to SILTY SAND |

NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

MCK0002751

The Earth Technology
Corporation

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|----------------------------|
| 20.5 | 321.3 | 298.4 | 1.01 | NA | SAND to SILTY SAND |
| 21.0 | 374.5 | 343.9 | 1.06 | NA | SAND to SILTY SAND |
| 21.5 | 220.3 | 200.0 | 2.33 | NA | *SILTY SAND to CLAYEY SAND |
| 22.0 | 105.4 | 94.7 | 2.25 | NA | SILTY SAND to SANDY SILT |
| 22.5 | 98.8 | 87.8 | 2.58 | NA | SILTY SAND to SANDY SILT |
| 23.0 | 73.3 | 64.4 | 2.12 | NA | SILTY SAND to SANDY SILT |
| 23.5 | 52.7 | 45.8 | 3.30 | NA | SANDY SILT to CLAYEY SILT |
| 24.0 | 52.5 | 45.1 | 2.44 | NA | SANDY SILT to CLAYEY SILT |
| 24.5 | 62.6 | 53.3 | 2.44 | NA | SILTY SAND to SANDY SILT |
| 25.0 | 72.1 | 60.7 | 2.44 | NA | SILTY SAND to SANDY SILT |
| 25.5 | 76.0 | 63.4 | 2.85 | NA | SANDY SILT to CLAYEY SILT |
| 26.0 | 65.0 | 53.7 | 3.27 | NA | SANDY SILT to CLAYEY SILT |
| 26.5 | 63.2 | 51.6 | 2.98 | NA | SANDY SILT to CLAYEY SILT |
| 27.0 | 42.1 | 34.0 | 4.33 | NA | CLAYEY SILT to SILTY CLAY |
| 27.5 | 32.3 | 25.9 | 2.72 | NA | SANDY SILT to CLAYEY SILT |
| 28.0 | 28.6 | 22.7 | 3.05 | NA | SANDY SILT to CLAYEY SILT |
| 28.5 | 33.2 | 26.1 | 3.09 | NA | SANDY SILT to CLAYEY SILT |
| 29.0 | 39.1 | 30.4 | 2.64 | NA | SANDY SILT to CLAYEY SILT |
| 29.5 | 42.1 | 32.4 | 3.37 | NA | SANDY SILT to CLAYEY SILT |
| 30.0 | 39.1 | 29.9 | 4.22 | NA | CLAYEY SILT to SILTY CLAY |
| 30.5 | 54.2 | 40.9 | 3.09 | NA | SANDY SILT to CLAYEY SILT |
| 31.0 | 52.7 | 39.5 | 3.62 | NA | SANDY SILT to CLAYEY SILT |
| 31.5 | 48.1 | 35.7 | 4.04 | NA | CLAYEY SILT to SILTY CLAY |
| 32.0 | 49.2 | 36.2 | 3.92 | NA | CLAYEY SILT to SILTY CLAY |
| 32.5 | 56.5 | 41.2 | 4.72 | NA | *SANDY CLAY to SILTY CLAY |
| 33.0 | 49.0 | 35.4 | 5.73 | NA | *SANDY CLAY to SILTY CLAY |
| 33.5 | 52.0 | 37.2 | 6.07 | NA | *SANDY CLAY to SILTY CLAY |
| 34.0 | 57.3 | 40.6 | 5.79 | NA | *SANDY CLAY to SILTY CLAY |
| 34.5 | 55.8 | 39.2 | 6.04 | NA | *SANDY CLAY to SILTY CLAY |
| 35.0 | 52.4 | 36.5 | 6.14 | NA | *SANDY CLAY to SILTY CLAY |
| 35.5 | 60.9 | 42.1 | 5.58 | NA | *SANDY CLAY to SILTY CLAY |
| 36.0 | 61.4 | 42.0 | 5.84 | NA | *SANDY CLAY to SILTY CLAY |
| 36.5 | 51.2 | 34.7 | 5.43 | NA | *SANDY CLAY to SILTY CLAY |
| 37.0 | 53.5 | 36.0 | 5.84 | NA | *SANDY CLAY to SILTY CLAY |
| 37.5 | 54.9 | 36.5 | 4.79 | NA | *SANDY CLAY to SILTY CLAY |
| 38.0 | 44.3 | 29.2 | 5.45 | NA | *SANDY CLAY to SILTY CLAY |
| 38.5 | 37.6 | 24.6 | 4.73 | NA | CLAYEY SILT to SILTY CLAY |
| 39.0 | 44.0 | 28.6 | 4.59 | NA | CLAYEY SILT to SILTY CLAY |
| 39.5 | 55.3 | 35.6 | 4.80 | NA | *SANDY CLAY to SILTY CLAY |
| 40.0 | 68.3 | 43.6 | 5.13 | NA | *SANDY CLAY to SILTY CLAY |
| 40.5 | 70.6 | 44.7 | 4.53 | NA | *SANDY CLAY to SILTY CLAY |
| 41.0 | 96.1 | 60.3 | 5.25 | NA | *SANDY CLAY to SILTY CLAY |
| 41.5 | 82.7 | 51.5 | 5.80 | NA | *SANDY CLAY to SILTY CLAY |
| 42.0 | 103.5 | 63.9 | 4.33 | NA | *SANDY CLAY to SILTY CLAY |
| 42.5 | 165.7 | 101.4 | 3.14 | NA | *CLAYEY SAND to SANDY CLAY |
| 43.0 | 159.4 | 96.7 | 2.52 | NA | SILTY SAND to SANDY SILT |
| 43.5 | 120.7 | 72.6 | 4.06 | NA | *CLAYEY SAND to SANDY CLAY |
| 44.0 | 90.9 | 54.2 | 5.54 | NA | *SANDY CLAY to SILTY CLAY |
| 44.5 | 77.3 | 45.8 | 6.19 | NA | *SANDY CLAY to SILTY CLAY |
| 45.0 | 65.9 | 38.7 | 7.77 | NA | *SANDY CLAY to SILTY CLAY |

NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

MCK0002752

| DEPTH
(ft) | TIP RESISTANCE
(tsf) | NORMALIZED
TIP RESISTANCE
(tsf) | FRICTION
RATIO
(%) | CONE PORE
PRESSURE
(tsf) | SOIL BEHAVIOR TYPE |
|---------------|-------------------------|---------------------------------------|--------------------------|--------------------------------|---------------------------|
| 45.5 | 91.1 | 53.0 | 5.09 | NA | *SANDY CLAY to SILTY CLAY |
| 46.0 | 141.6 | 81.8 | 2.81 | NA | SILTY SAND to SANDY SILT |
| 46.5 | 116.5 | 66.7 | 3.17 | NA | SANDY SILT to CLAYEY SILT |
| 47.0 | 259.4 | 147.4 | 2.17 | NA | SILTY SAND to SANDY SILT |
| 47.5 | 432.9 | 244.0 | .86 | NA | SAND to SILTY SAND |
| 48.0 | 377.6 | 211.1 | .96 | NA | SAND to SILTY SAND |
| 48.5 | 241.3 | 133.8 | 1.18 | NA | SAND to SILTY SAND |
| 49.0 | 233.1 | 128.2 | 1.70 | NA | SAND to SILTY SAND |
| 49.5 | 265.7 | 145.0 | 1.26 | NA | SAND to SILTY SAND |
| 50.0 | 299.9 | 162.3 | 1.16 | NA | SAND to SILTY SAND |
| 50.5 | 299.2 | 160.7 | 1.74 | NA | SAND to SILTY SAND |
| 51.0 | 324.4 | 172.8 | 1.18 | NA | SAND to SILTY SAND |
| 51.5 | 339.2 | 179.3 | 1.32 | NA | SAND to SILTY SAND |
| 52.0 | 265.0 | 139.0 | 1.36 | NA | SAND to SILTY SAND |
| 52.5 | 272.3 | 141.6 | 1.43 | NA | SAND to SILTY SAND |
| 53.0 | 297.1 | 153.3 | 1.28 | NA | SAND to SILTY SAND |
| 53.5 | 333.2 | 170.6 | 1.23 | NA | SAND to SILTY SAND |
| 54.0 | 382.0 | 194.0 | 1.15 | NA | SAND to SILTY SAND |
| 54.5 | 412.7 | 208.0 | 1.10 | NA | SAND to SILTY SAND |
| 55.0 | 359.8 | 179.9 | .94 | NA | SAND to SILTY SAND |
| 55.5 | 291.1 | 145.0 | 1.44 | NA | SAND to SILTY SAND |
| 56.0 | 270.2 | 134.1 | 1.42 | NA | SAND to SILTY SAND |
| 56.5 | 292.0 | 144.4 | 1.43 | NA | SAND to SILTY SAND |
| 57.0 | 309.6 | 152.6 | 1.68 | NA | SAND to SILTY SAND |
| 57.5 | 310.3 | 152.4 | 1.68 | NA | SAND to SILTY SAND |
| 58.0 | 324.6 | 158.8 | 1.57 | NA | SAND to SILTY SAND |
| 58.5 | 353.6 | 172.4 | 1.52 | NA | SAND to SILTY SAND |
| 59.0 | 390.3 | 189.6 | 1.45 | NA | SAND to SILTY SAND |
| 59.5 | 444.2 | 215.0 | 1.40 | NA | SAND to SILTY SAND |
| 60.0 | 440.6 | 212.5 | 1.36 | NA | SAND to SILTY SAND |
| 60.5 | 463.6 | 222.8 | 1.51 | NA | SAND to SILTY SAND |
| 61.0 | 484.7 | 232.1 | 1.56 | NA | SAND to SILTY SAND |
| 61.5 | 470.4 | 224.4 | 1.47 | NA | SAND to SILTY SAND |
| 62.0 | 467.6 | 222.3 | 1.05 | NA | SAND to SILTY SAND |
| 62.5 | 404.7 | 191.7 | .94 | NA | SAND to SILTY SAND |

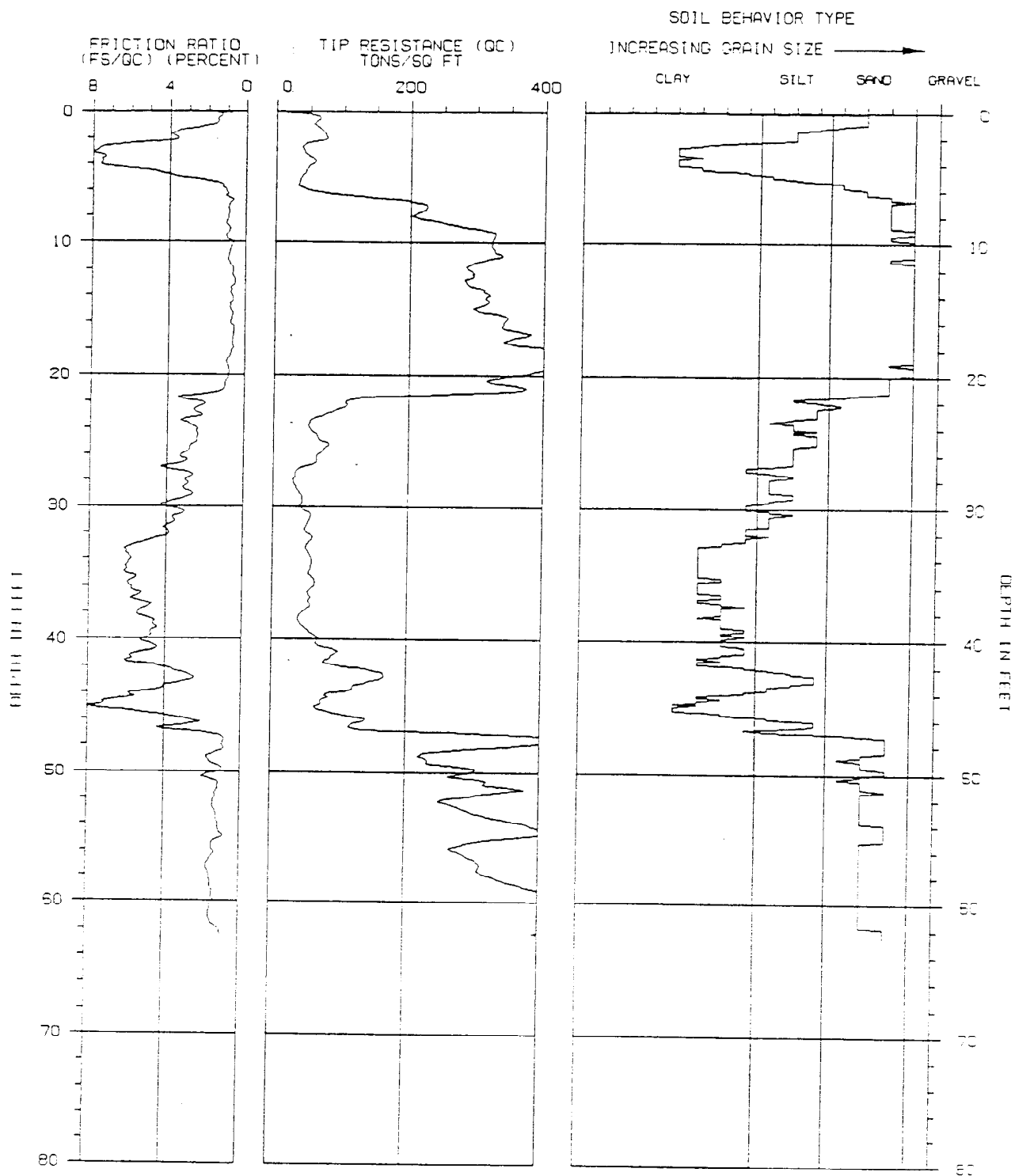
NA = NOT APPLICABLE

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL

ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

MCK0002753



ASSUMED TOTAL UNIT WT = 115 PCF

ASSUMED DEPTH OF WATER TABLE = 55.0 FT

CONE PENETRATION TEST


SOUNDING NUMBER: CPT-18

PROJECT NAME : HLA/MCKESSON-111

LOCATION : SANTA FE SPRGS

PROJECT NUMBER : 92-380-09502

DATE : 10-26-1991

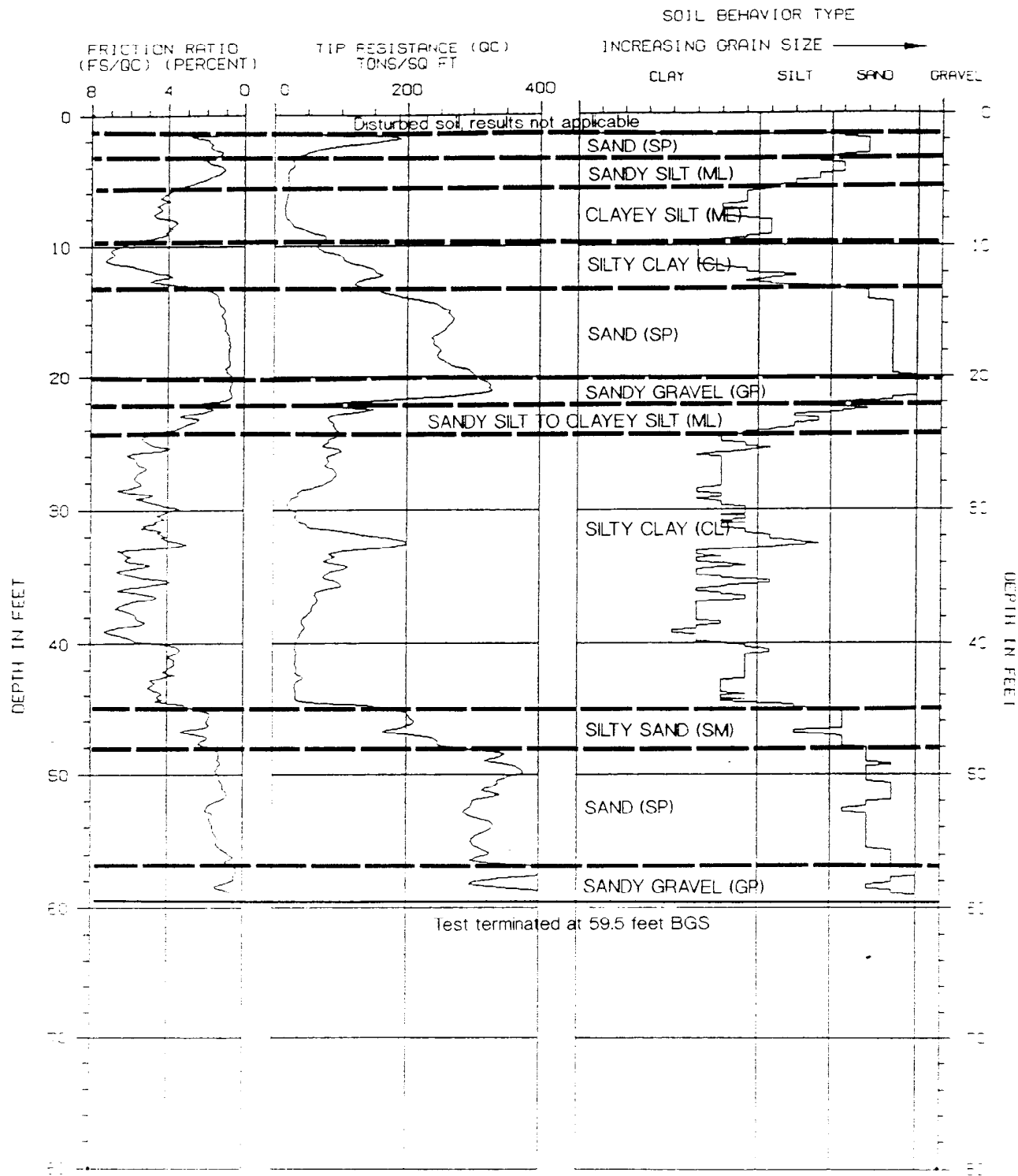
 THE EARTH TECHNOLOGY CORPORATION

MCK0002754

MCK0002755

APPENDIX D
INTERPRETED CPT DATA

MCK0002756



MCK0002757



Harding Lawson Associates
Engineering and
Environmental Services

CPT-1, INTERPRETED LOG

McKesson Corporation Property
Santa Fe Springs, California

D1

DRAWN
JTL

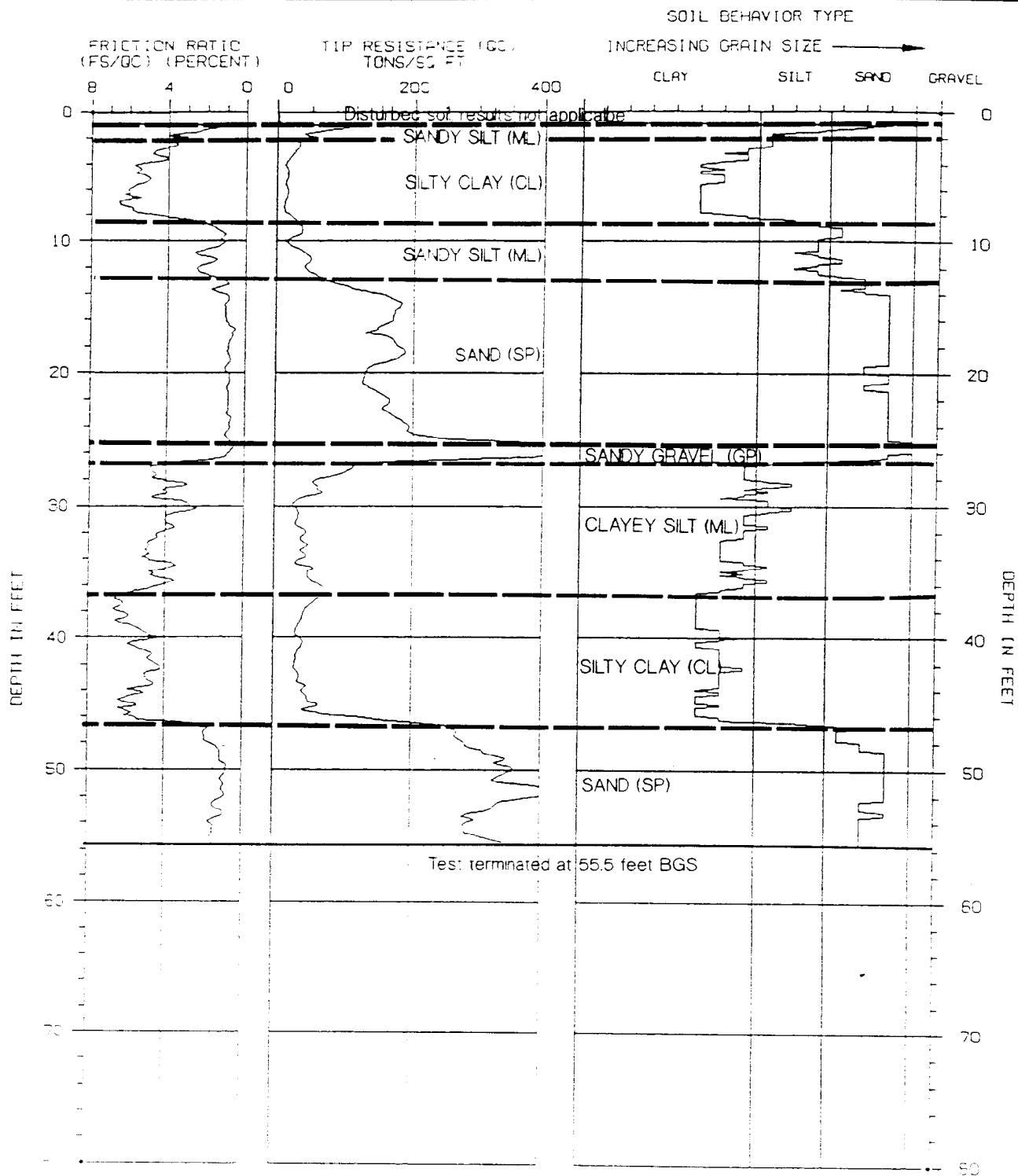
JOB NUMBER
17333, 168.11

APPROVED
THC

DATE
1/92

REVISED

DATE



MCK0002758



Harding Lawson Associates
Engineering and
Environmental Services

CPT-2, INTERPRETED LOG

McKesson Corporation Property
Santa Fe Springs, California

D2

DRAWN
JTL

JOE NUMBER
17333,168.11

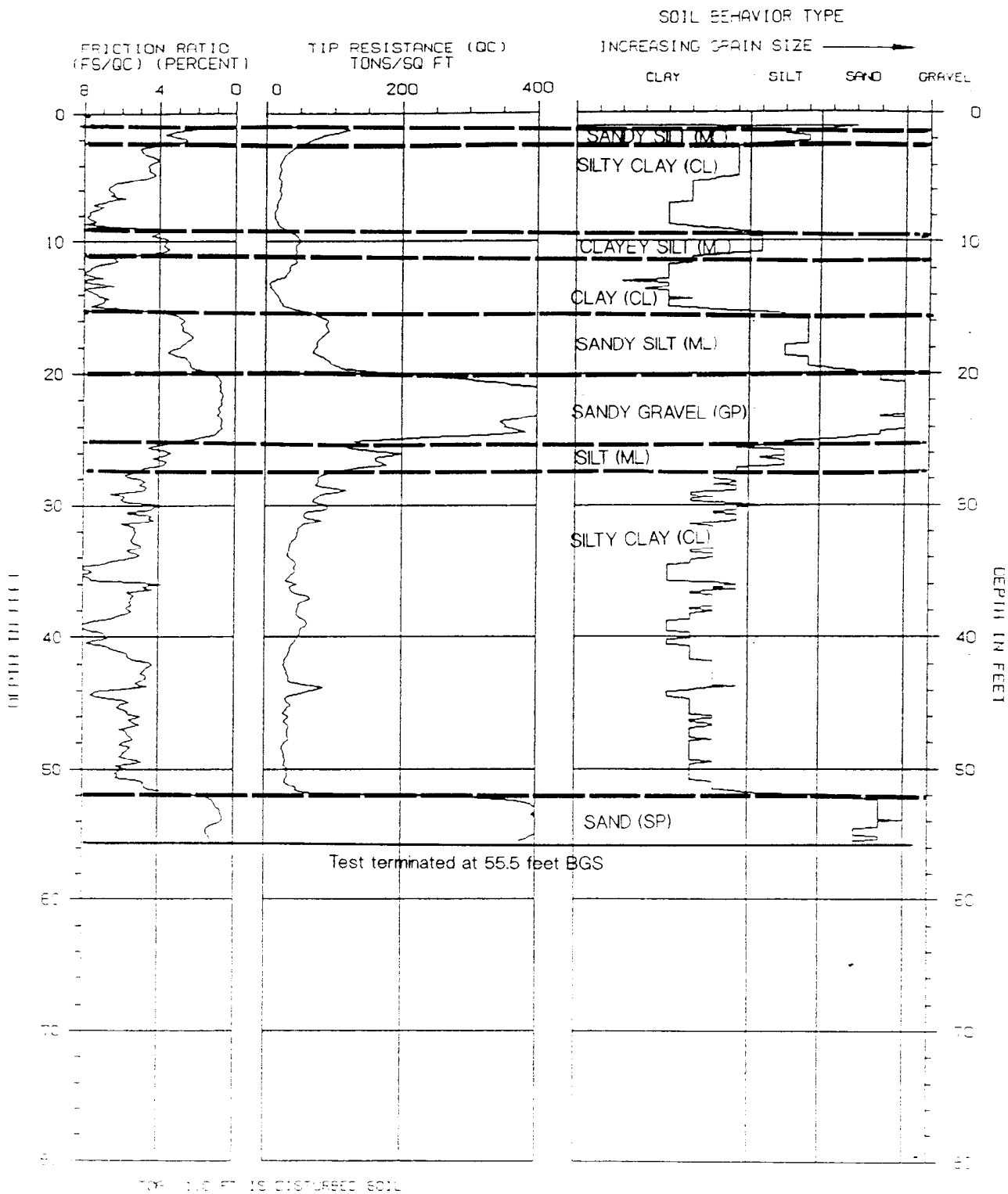
APPROVED
THK

DATE
1/92

REVISED

DATE

MDX 17333168.DWG



MCK0002759



Harding Lawson Associates
Engineering and
Environmental Services

CPT-3, INTERPRETED LOG

McKesson Corporation Property
Santa Fe Springs, California

D3

DRAWN
JTL

JOB NUMBER
17333,168.11

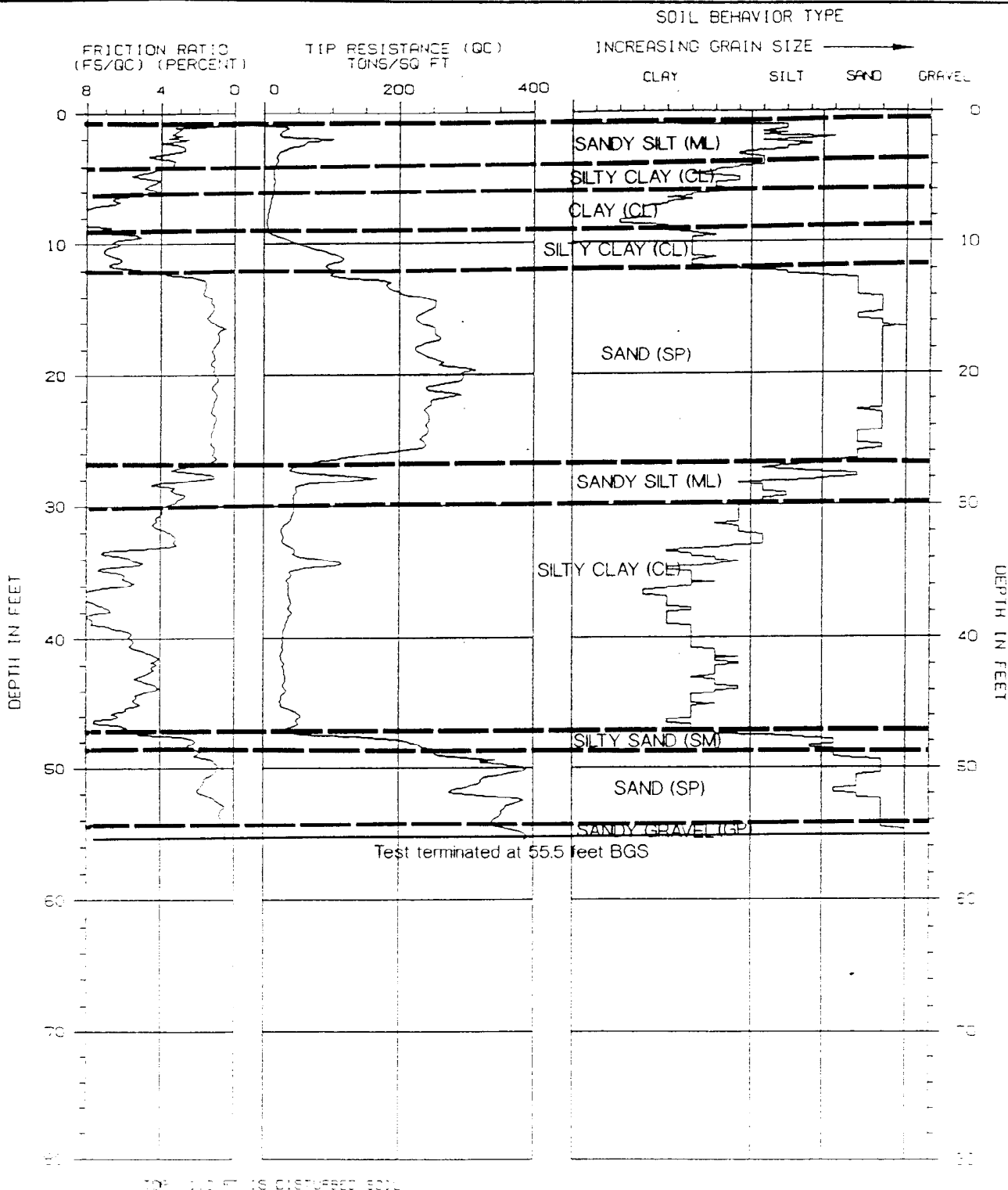
APPROVED
THC

DATE
1/92

REVISED

DATE

HDT 17333.168.0142



TOP 1.0 FT IS DISTURBED SOIL

Approximate surface elevation 145.94 feet, MSL

— Approximate geologic contact

MCK0002760



Harding Lawson Associates
Engineering and
Environmental Services

CPT-4, INTERPRETED LOG

McKesson Corporation Property
Santa Fe Springs, California

D4

DRAWN
JTL

LOG NUMBER
17333.168.11

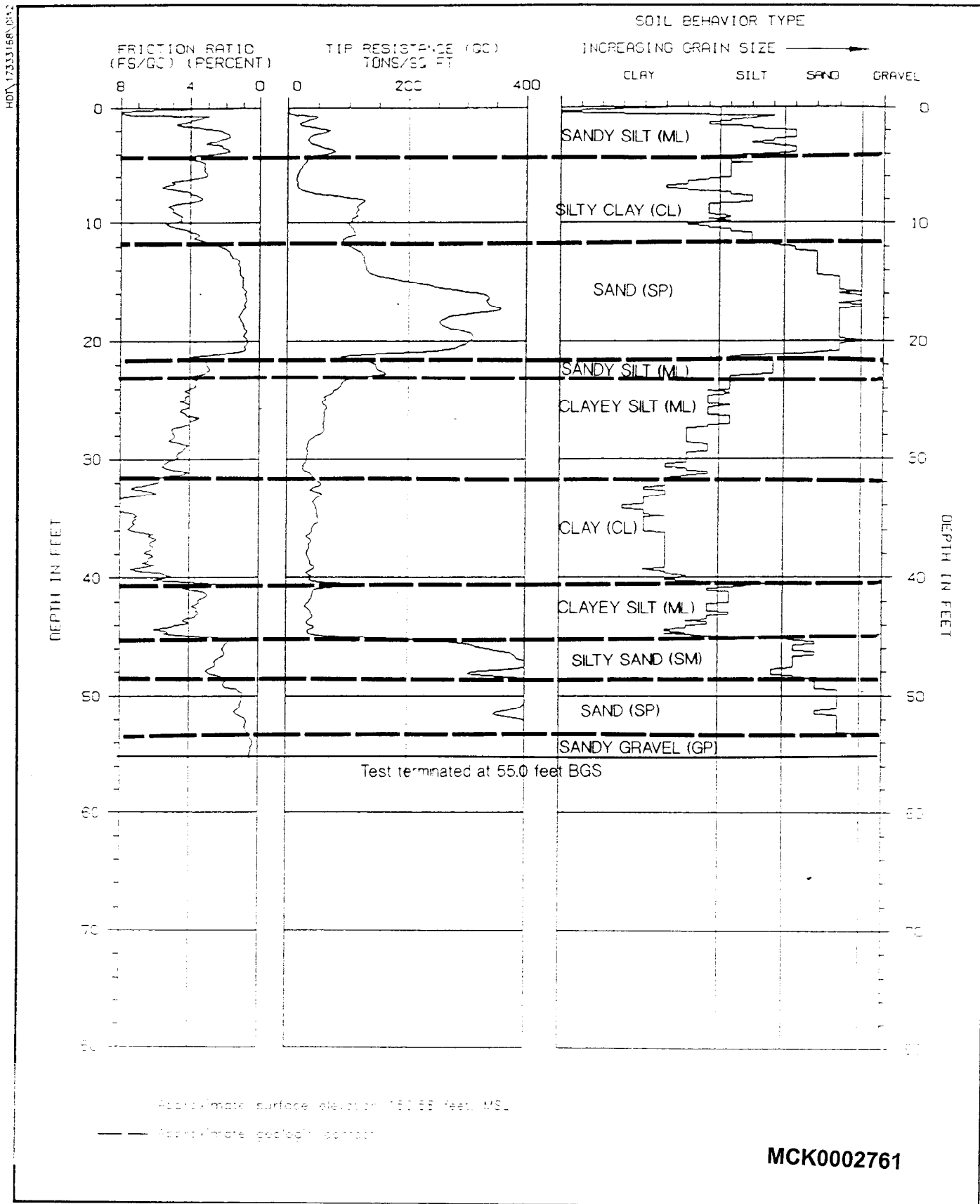
APPROVED

THK

DATE
1/92

REVISED

DATE



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Engineering and
Environmental Services

CPT-5, INTERPRETED LOG

Mckesson Corporation Property
Santa Fe Springs, California

D5

DRAWN
JTL

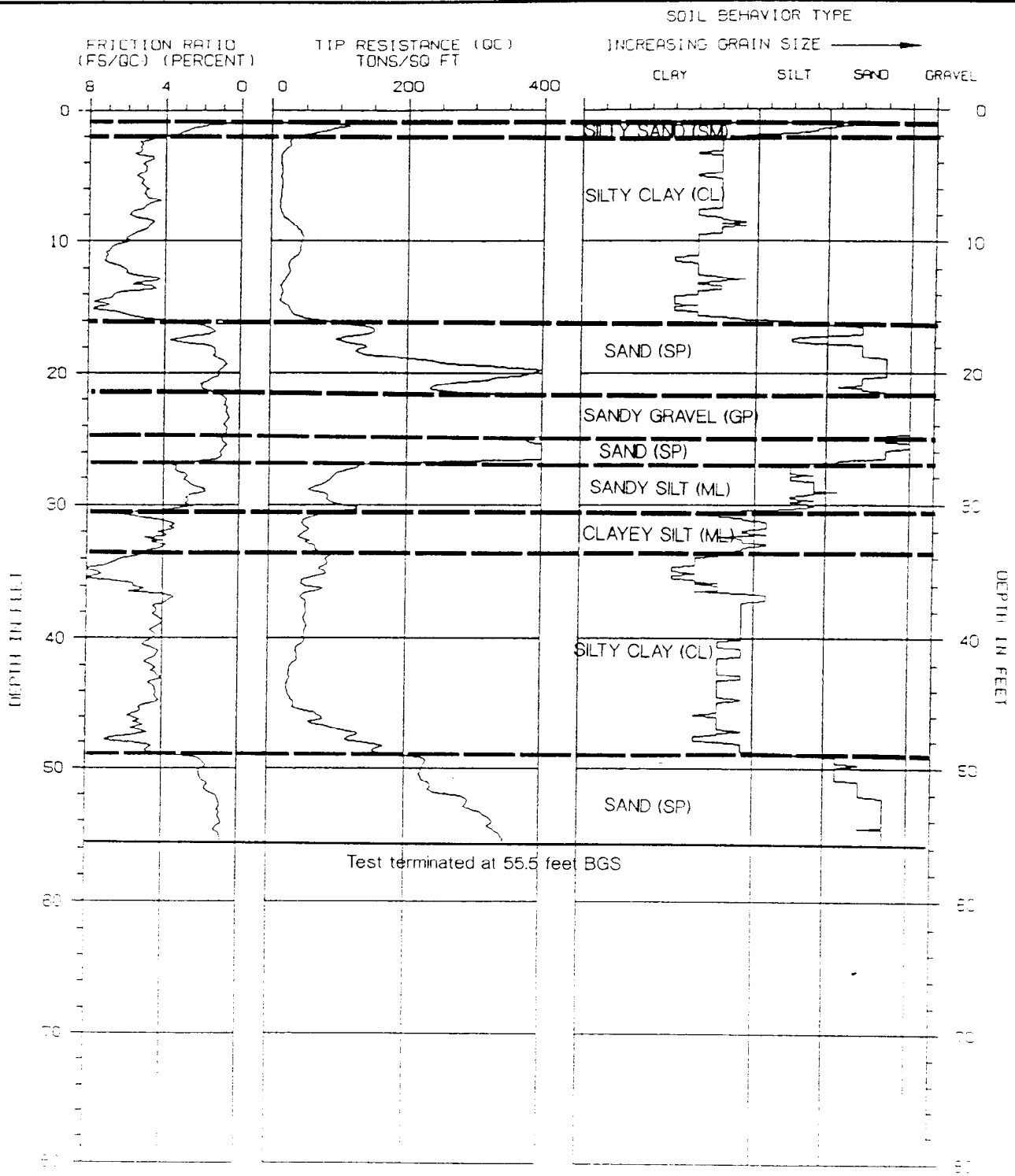
JOB NUMBER
17333,168.11

APPROVED
TAC

DATE
1/92

REVISED

DATE



MCK0002762



Harding Lawson Associates
Engineering and
Environmental Services

CPT-6, INTERPRETED LOG
McKesson Corporation Property
Santa Fe Springs, California

D6

DRAWN
JTL

JOB NUMBER
17333,168.11

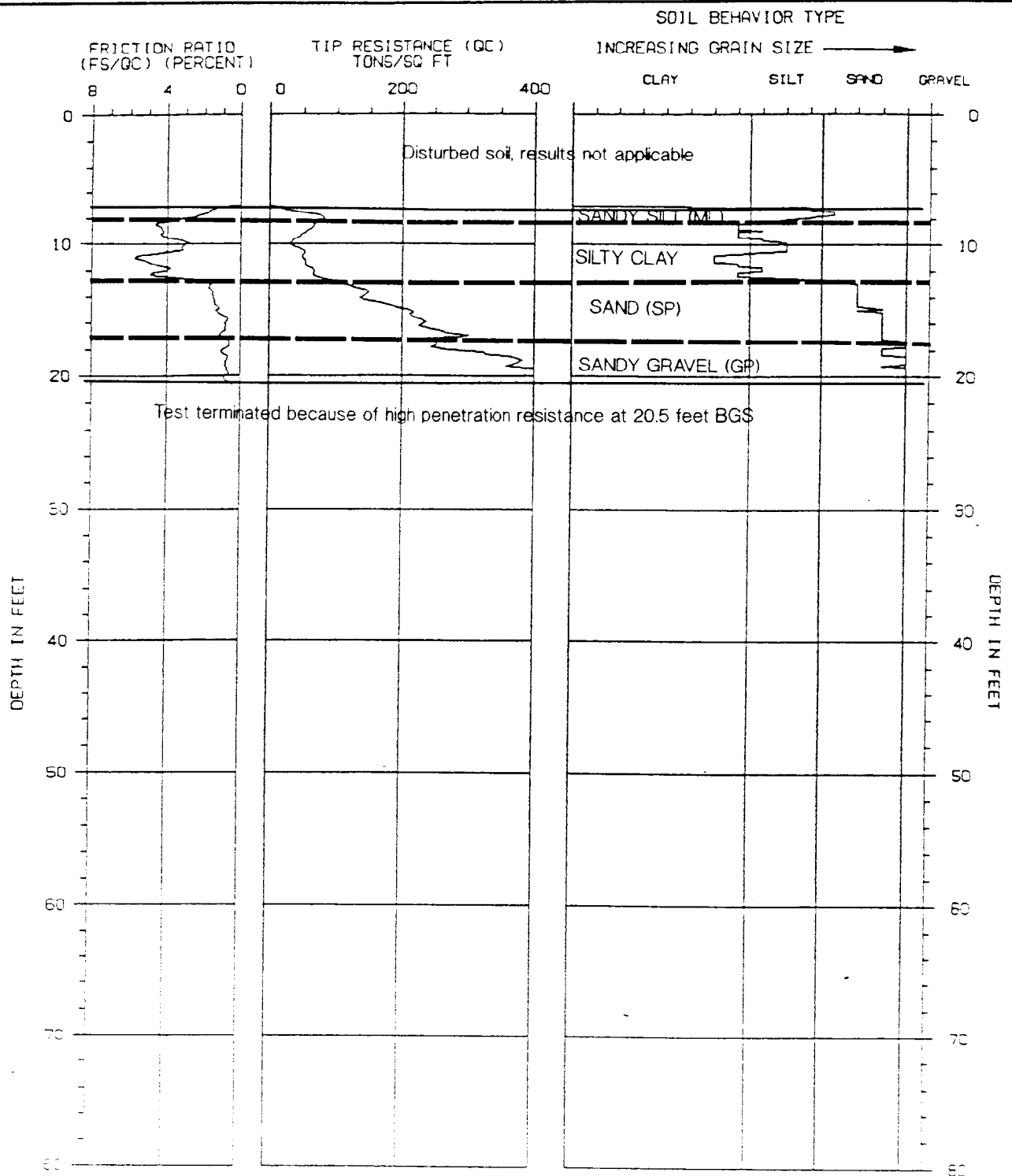
APPROVED
THL

DATE
1/92

REVISED

DATE

17333,168.D1A2



TOP 2.0 FT IS DISTURBED SOIL

Approximate surface elevation: 148.53 feet, MSL

— Approximate centerline elevation

MCK0002763



Harding Lawson Associates
Engineering and
Environmental Services

CPT-7, INTERPRETED LOG

McKesson Corporation Property
Santa Fe Springs, California

D7

DRAWN
JTL

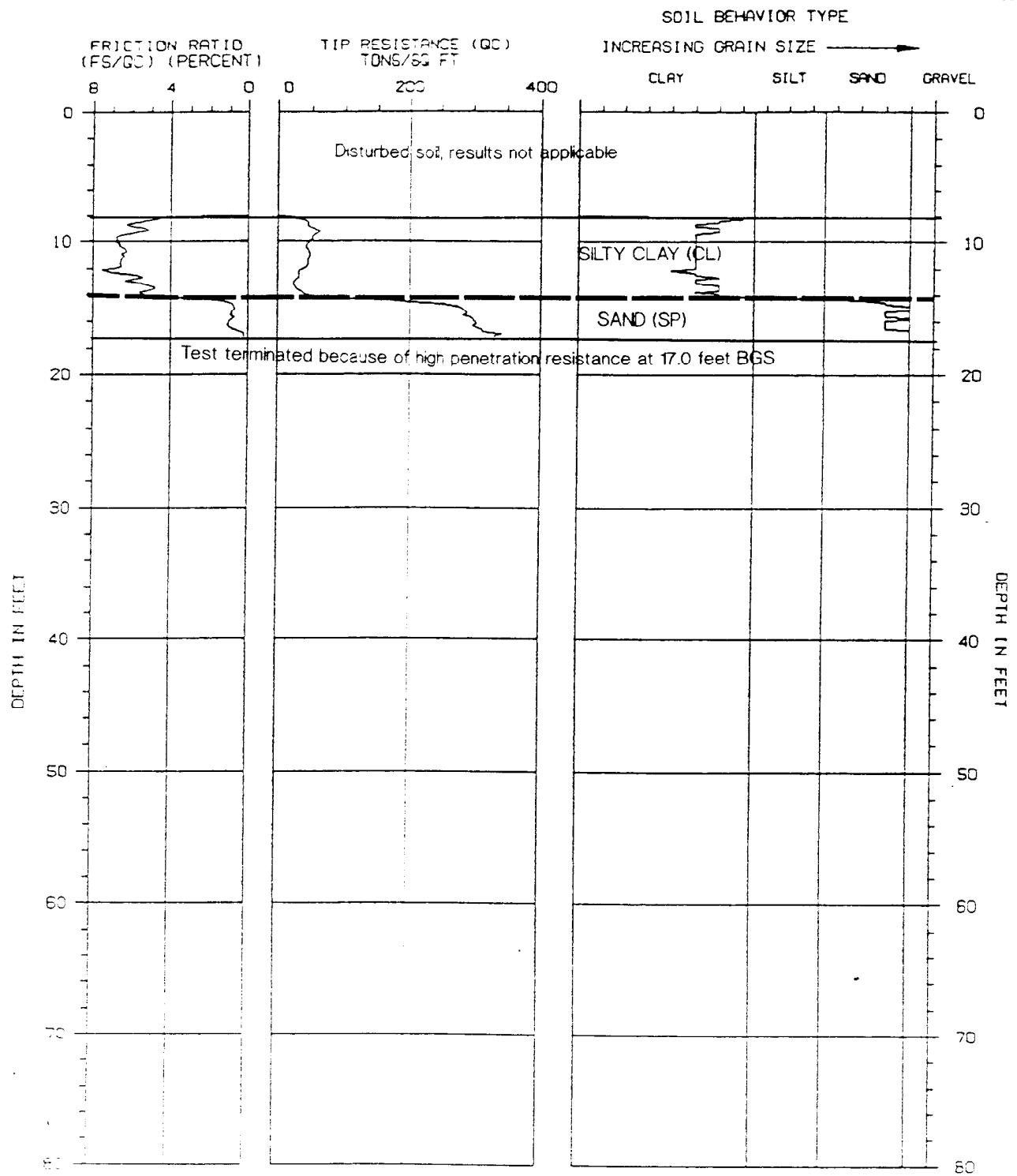
JOB NUMBER
17333,168.11

APPROVED
TAK

DATE
1/92

REVISED

DATE



TOP 18.0 FT IS DISTURBED SOIL

Approximate surface elevation 148.71 feet MSL

— Approximate geologic contact

MCK0002764



Harding-Lieson Associates
Engineering and
Environmental Services

CPT-8, INTERPRETED LOG
McKesson Corporation Property
Santa Fe Springs, California

D8

DRAWN
JTL

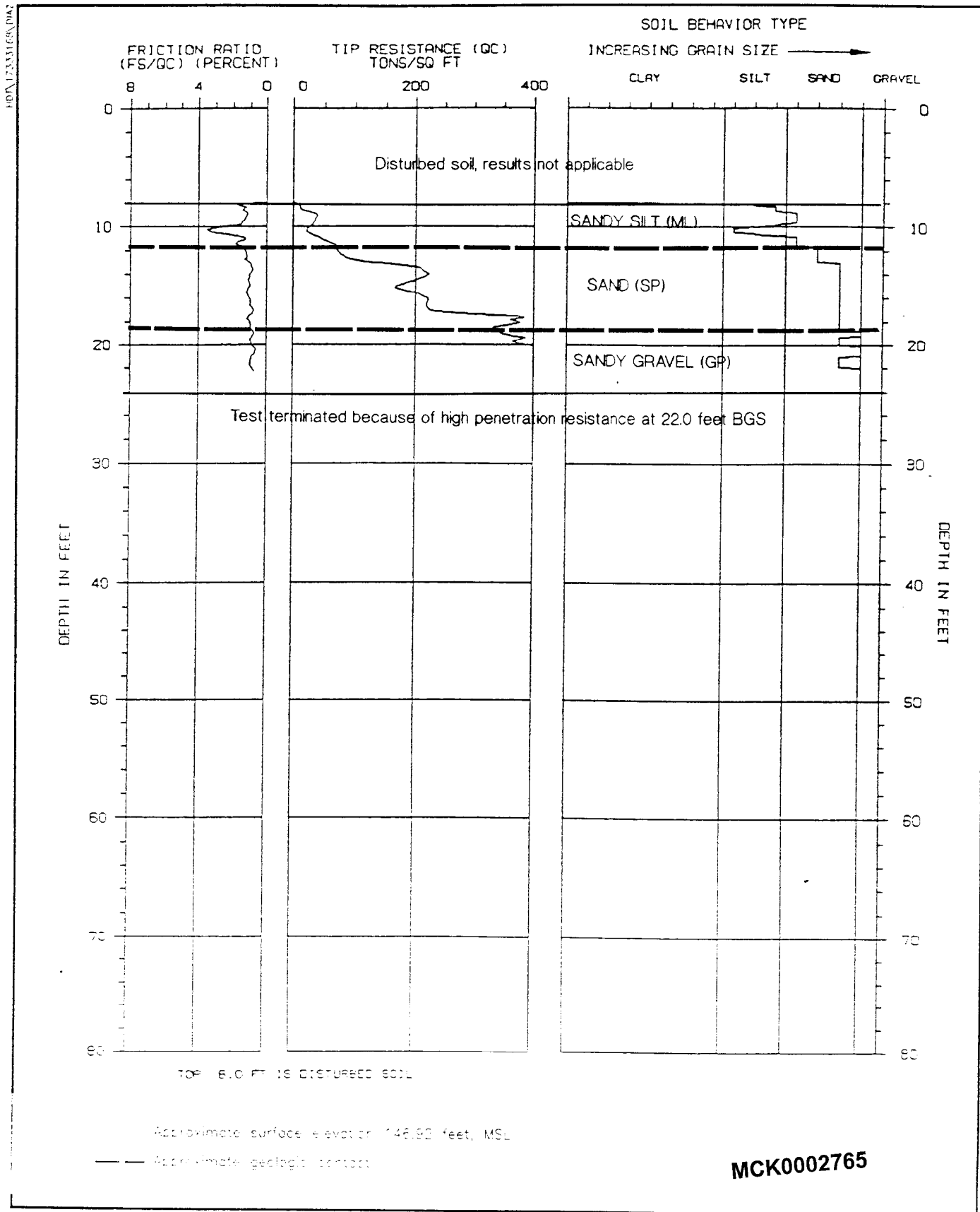
JOB NUMBER
17333,168.11

APPROVED
TAK

DATE
1/92

REVISED

DATE



Harding Lawson Associates
Engineering and
Environmental Services

CPT-9, INTERPRETED LOG

McKesson Corporation Property
Santa Fe Springs, California

D9

DRAWN
JTL

JOB NUMBER
17333,168.11

APPROVED

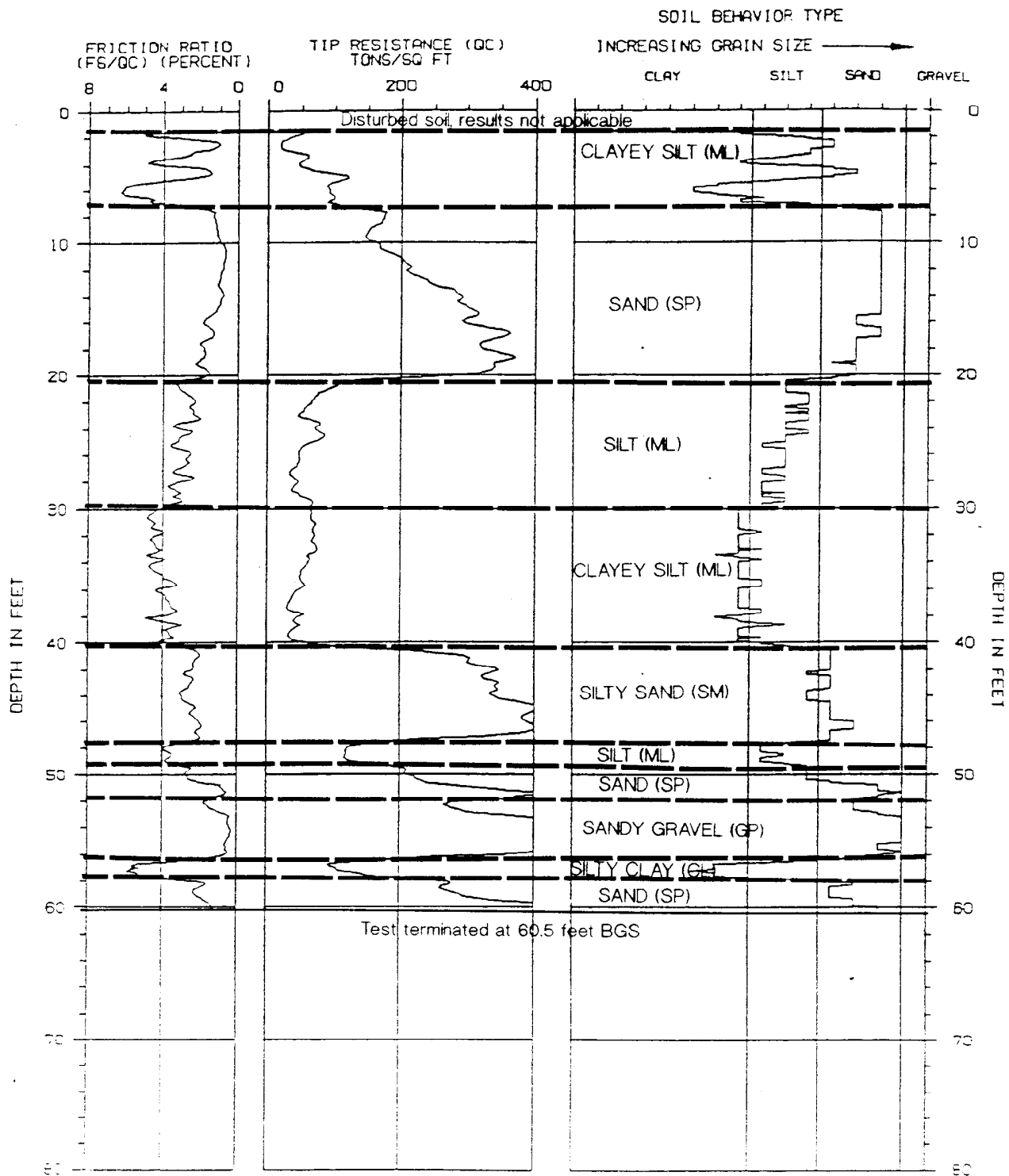
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1/92

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DATE



MCK0002766



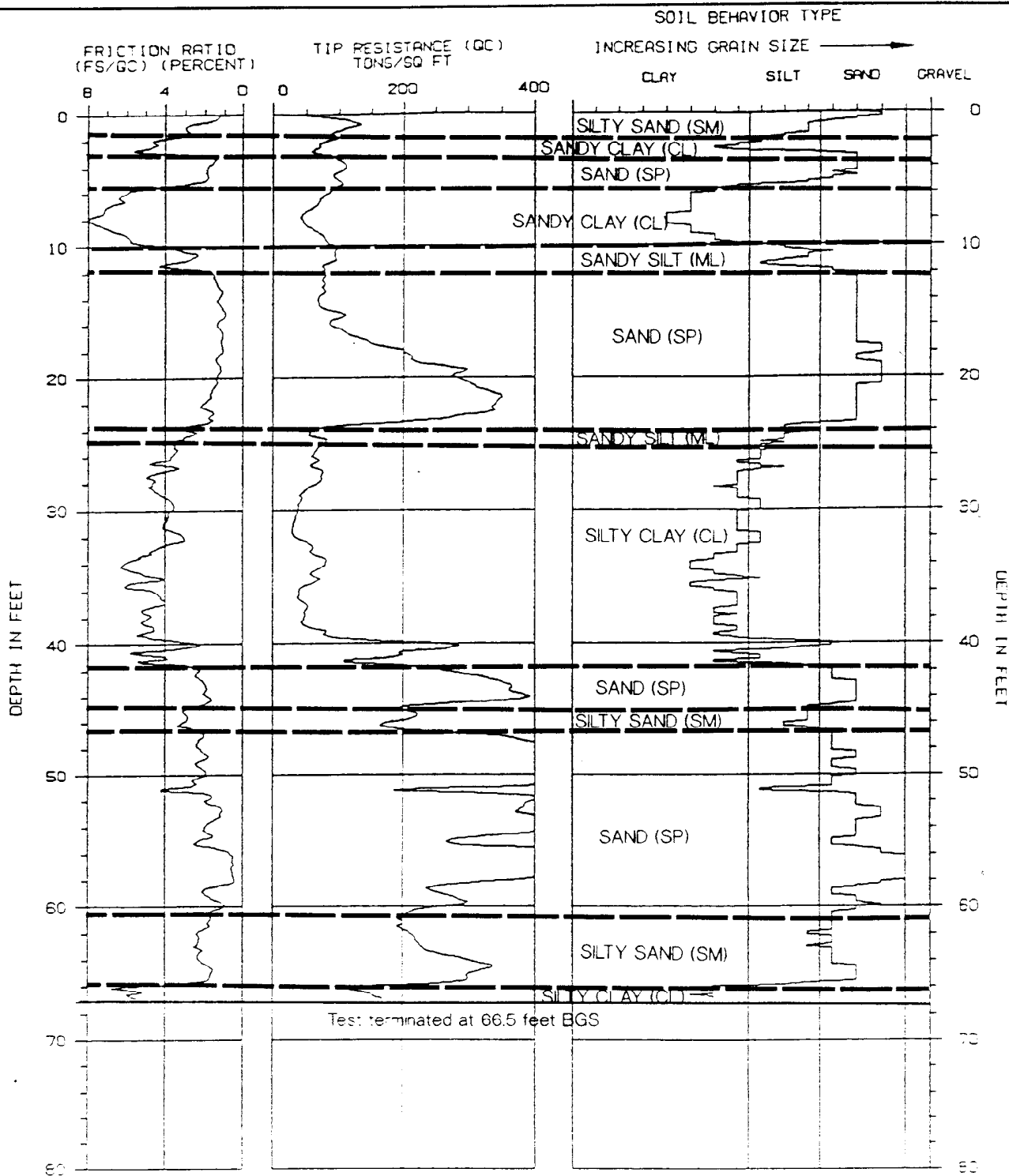
Harding Lawson Associates
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Environmental Services

CPT-10, INTERPRETED LOG
McKesson Corporation Property
Santa Fe Springs, California

D10

| DRAWN | JOB NUMBER | APPROVED | DATE | REVISED | DATE |
|-------|--------------|------------|------|---------|------|
| JTL | 17333,168.11 | <i>JHL</i> | 1/92 | | |

HD-11-133168-DIA2



Approximate surface elevation: 101.68 feet, MSL

— Approximate geologic contact

MCK0002767



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Engineering and
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CPT-11, INTERPRETED LOG

McKesson Corporation Property
Santa Fe Springs, California

D11

DRAWN
JTL

JOB NUMBER
17333,168.11

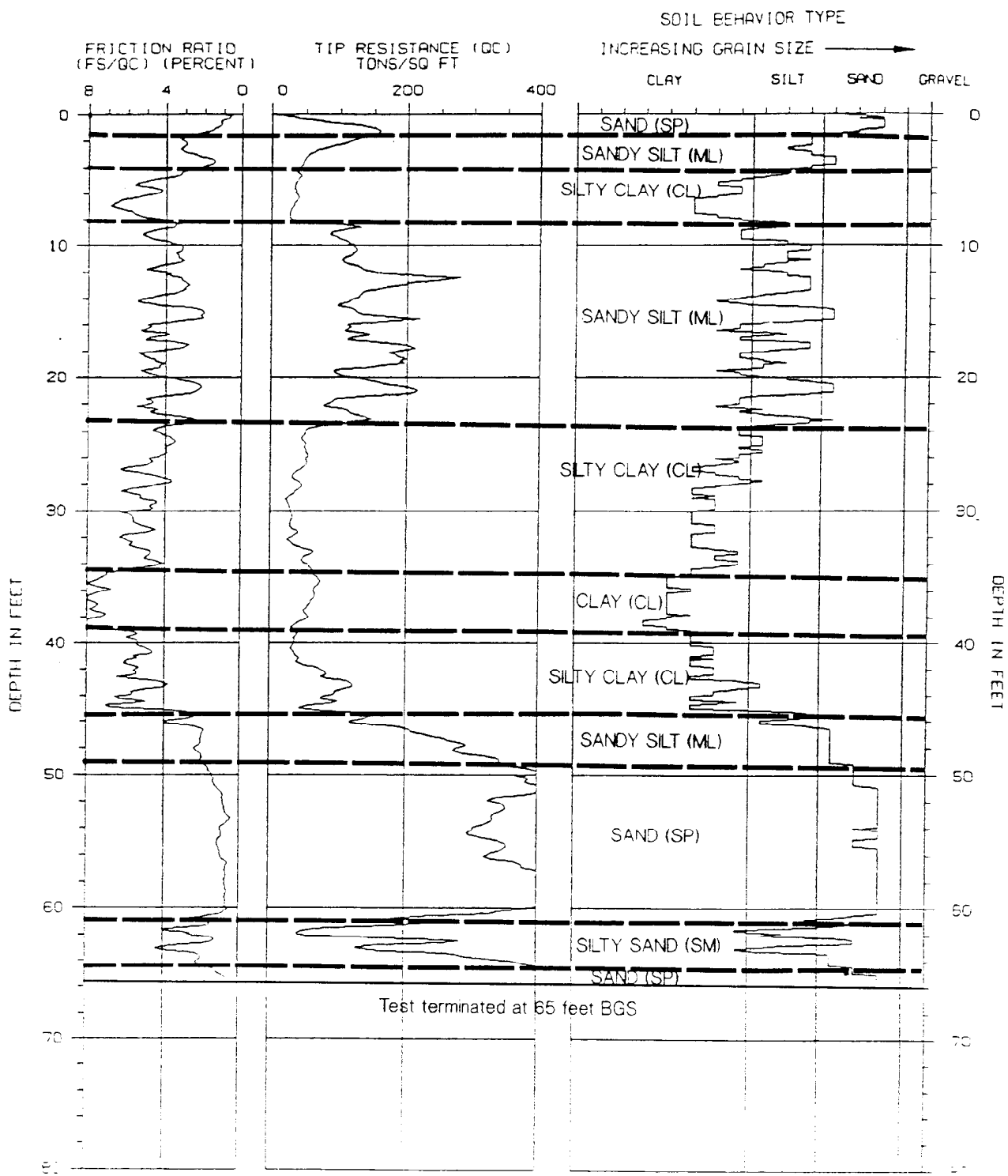
APPROVED
TAK

DATE
1/92

REVISED

DATE

HDV 17333168.DWG



Approximate surface elevation 180.01 feet MSL

— Approximate geologic contact

MCK0002768



Harding Lawson Associates
Engineering and
Environmental Services

CPT-12, INTERPRETED LOG

McKesson Corporation Property
Santa Fe Springs, California

D12

DRAWN
JTL

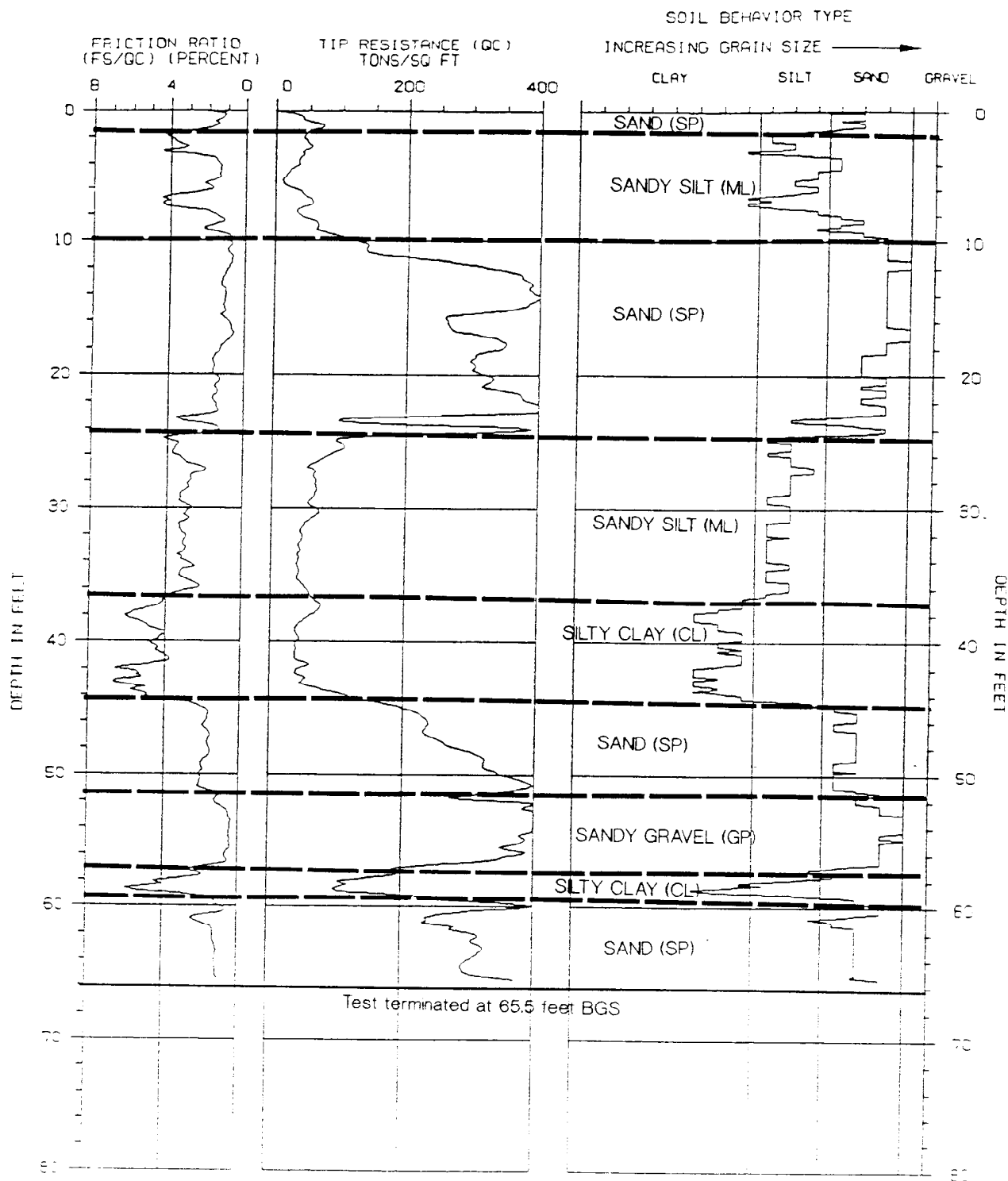
JOB NUMBER
17333,168.11

APPROVED
THK

DATE
1/92

REVISED

DATE



Approximate surface elevation 150.35 feet, MSL

— Approximate geologic contact

MCK0002769



Harding Lawson Associates
Engineering and
Environmental Services

CPT-13, INTERPRETED LOG
McKesson Corporation Property
Santa Fe Springs, California

D13

DRAWN
JTL

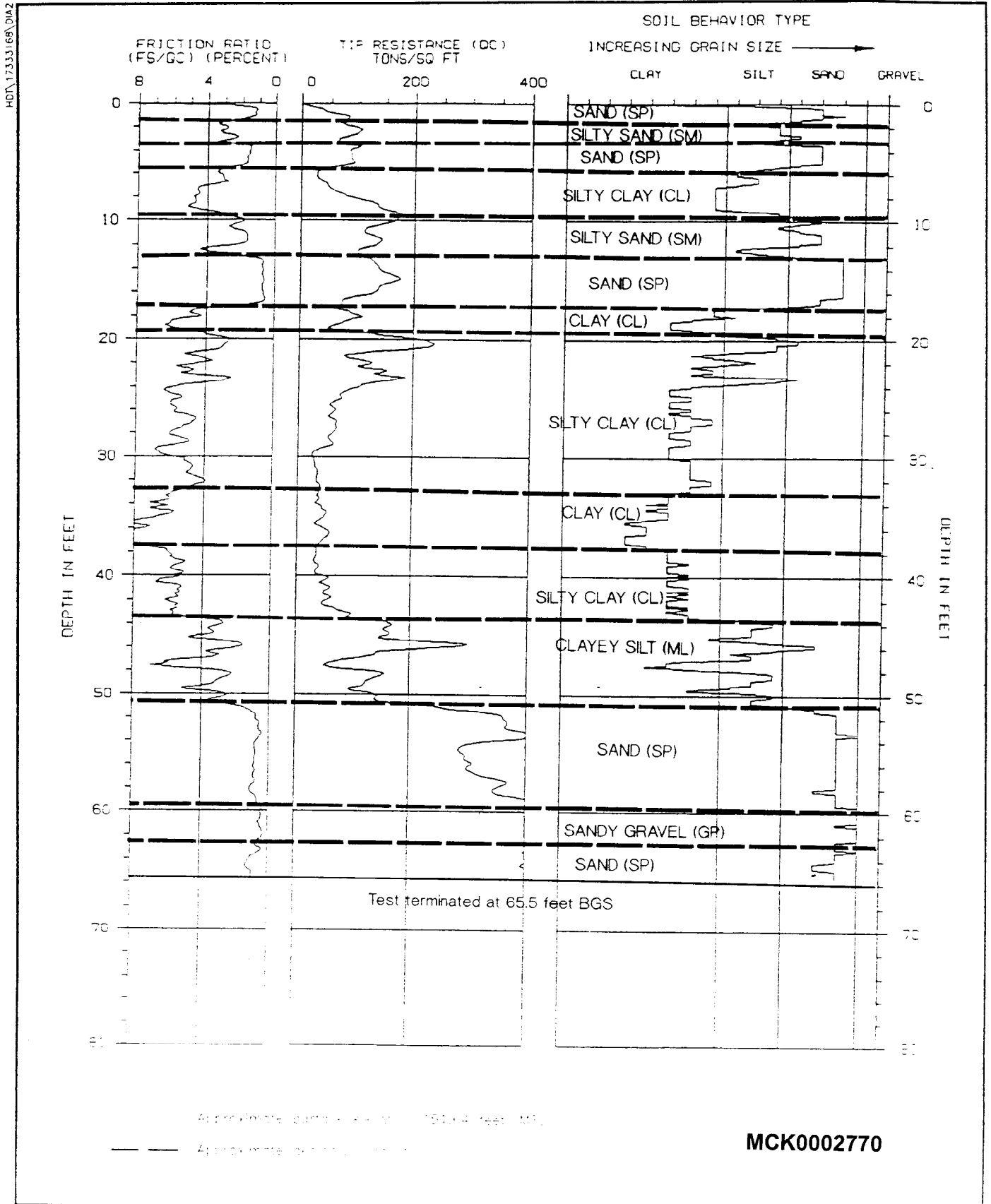
JOB NUMBER
17333,168,11

APPROVED
THL

DATE
1/92

REVISED

DATE



Harding Lawson Associates
Engineering and
Environmental Services

CPT-14, INTERPRETED LOG
McKesson Corporation Property
Santa Fe Springs, California

D14

DRAWN
JTL

JOB NUMBER
17333.168.11

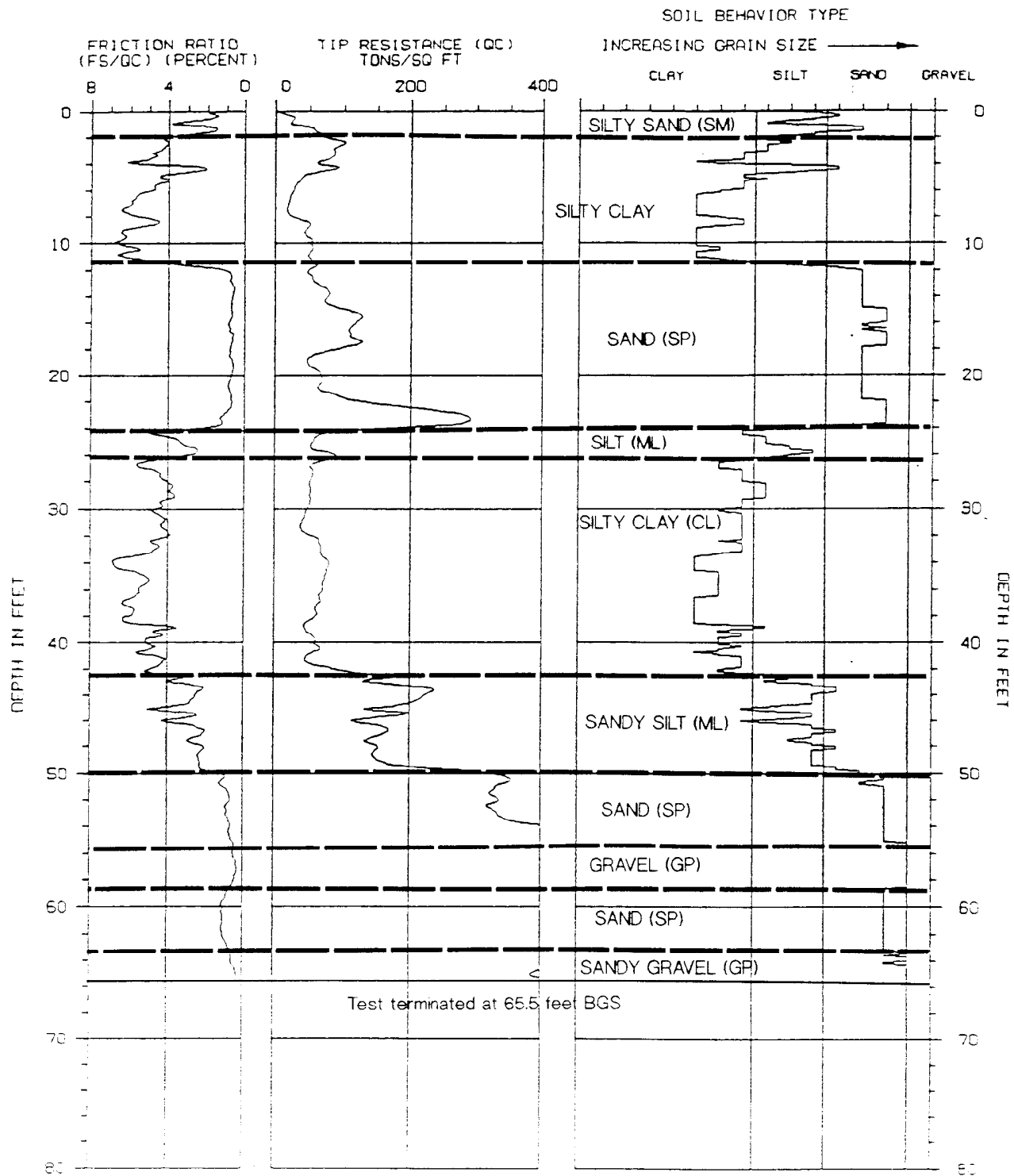
APPROVED
THK

DATE
1/92

REVISED

DATE

HDR 17333,168.DWG



MCK0002771



Harding Lawson Associates
Engineering and
Environmental Services

CPT-15, INTERPRETED LOG
McKesson Corporation Property
Santa Fe Springs, California

D15

DRAWN
JTL

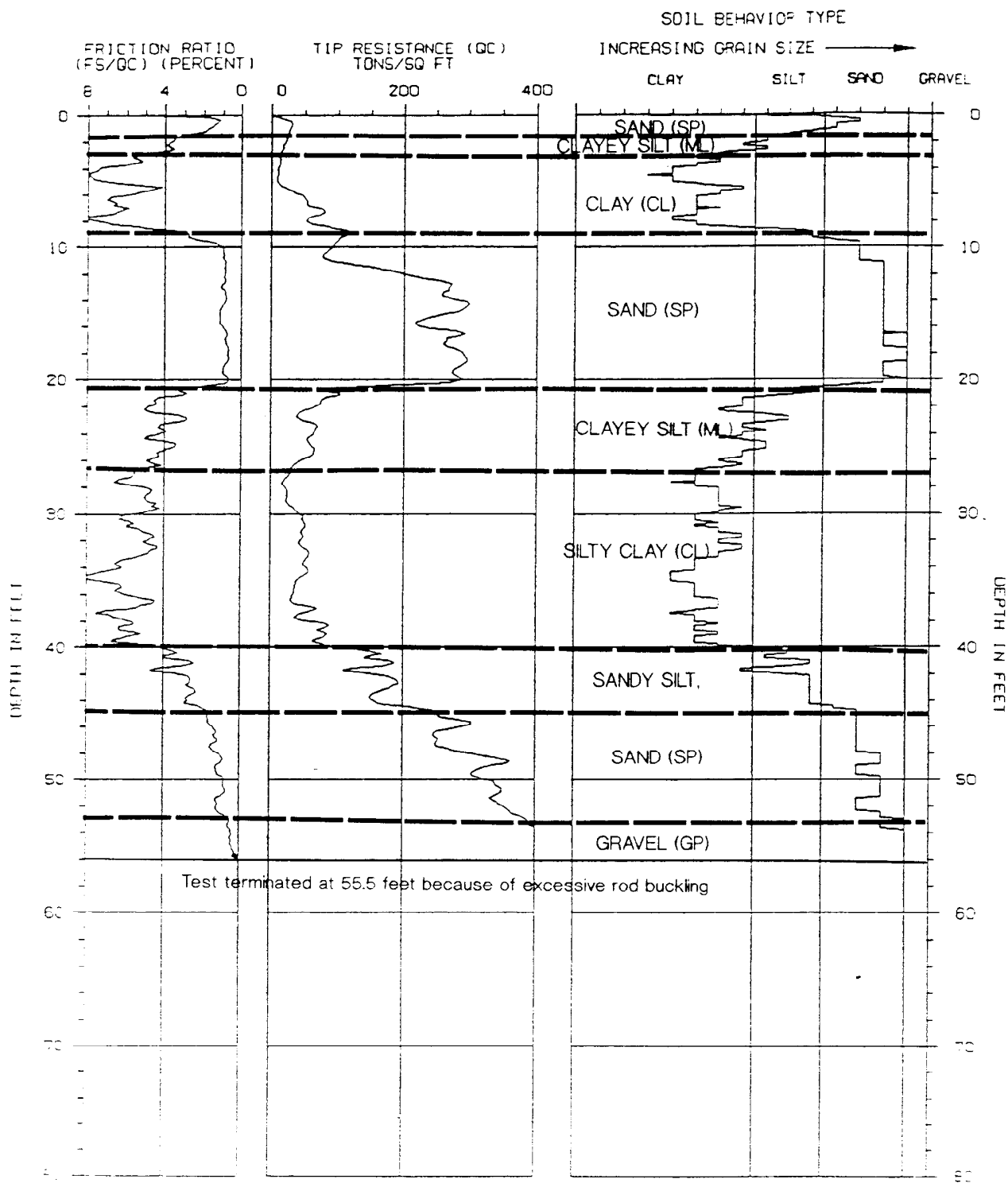
JOB NUMBER
17333,168.11

APPROVED
TAL

DATE
1/92

REVISED

DATE



Approximate surface elevation 147.33 feet, MSL

— Approximate geologic contact

MCK0002772



Harding Lawson Associates
Engineering and
Environmental Services

CPT-16, INTERPRETED LOG

McKesson Corporation Property
Santa Fe Springs, California

D16

DRAWN
JTL

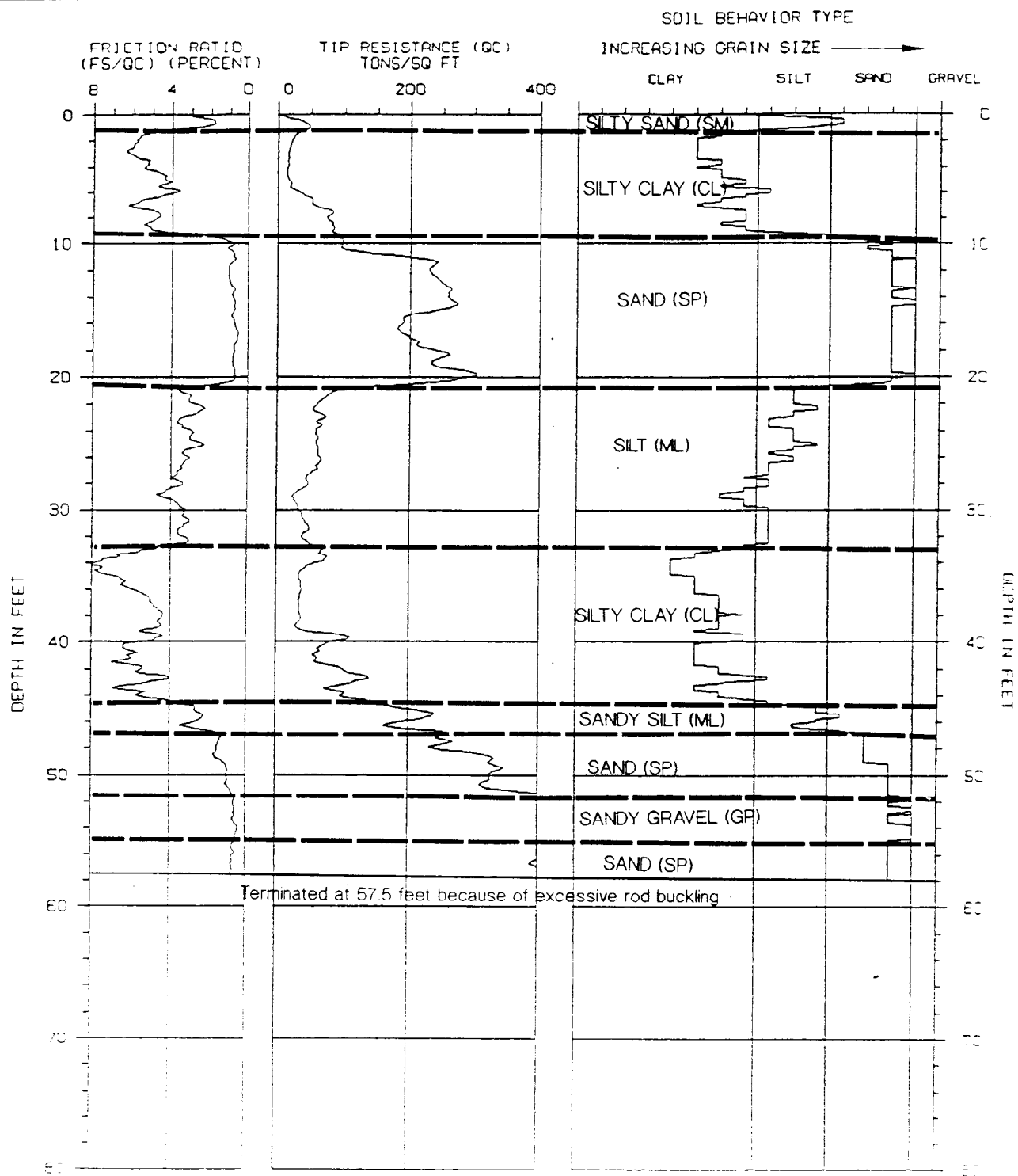
JOB NUMBER
17333,168.11

APPROVED
TAK

DATE
1/92

REVISED

DATE



MCK0002773



Harding Lawson Associates
Engineering and
Environmental Services

CPT-17, INTERPRETED LOG
McKesson Corporation Property
Santa Fe Springs, California

D17

DRAWN
JTL

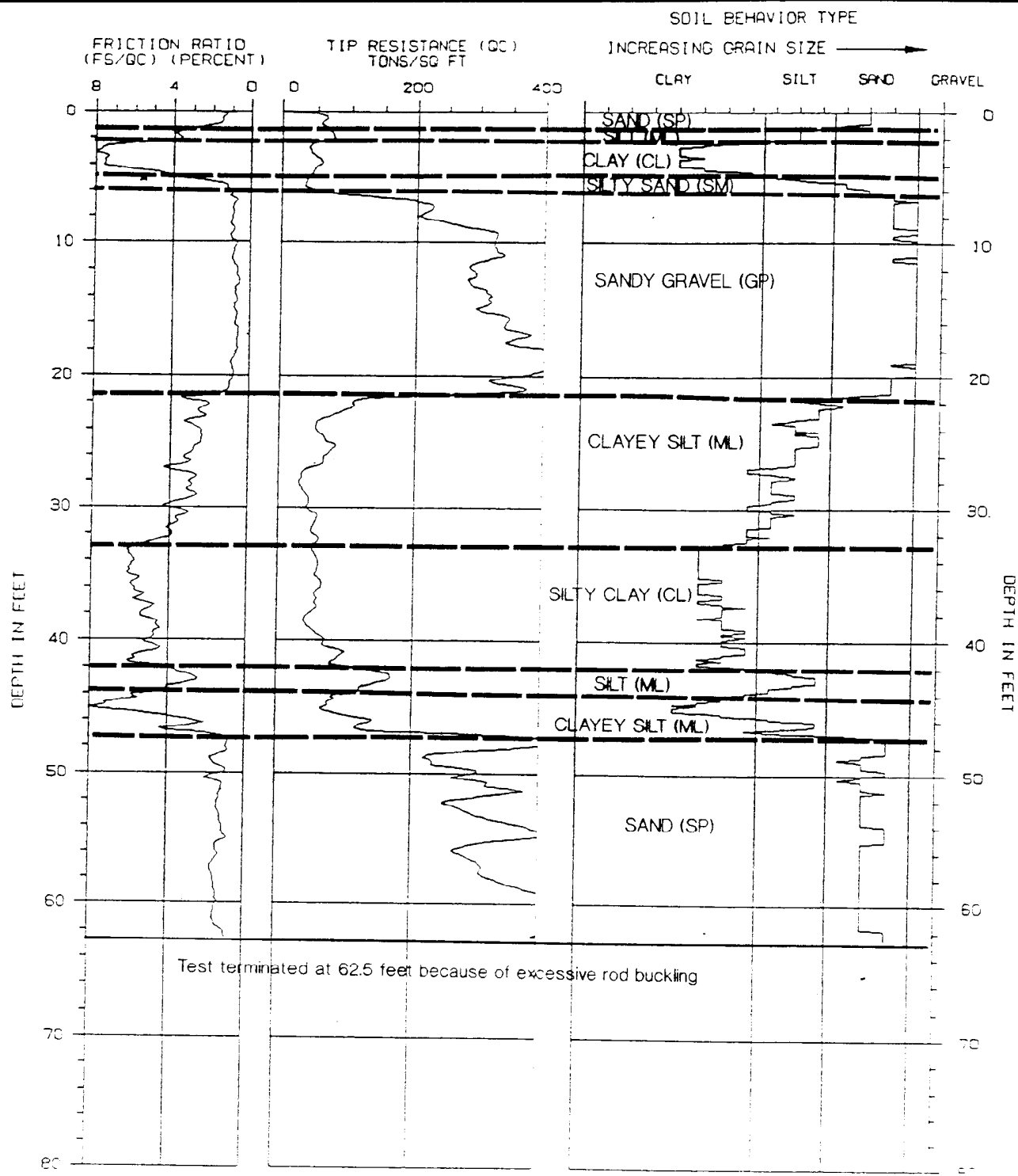
JOE NUMBER
17333,168.11

APPROVED
THK

DATE
1/92

REVISED

DATE



Approximate surface elevation 148.70 feet MSL

— Approximate geologic contact

MCK0002774



Harding Lawson Associates
Engineering and
Environmental Services

CPT-18, INTERPRETED LOG
McKesson Corporation Property
Santa Fe Springs, California

D18

DRAWN
JTL

JOB NUMBER
17333.168.11

APPROVED
TAK

DATE
1/92

REVISED

DATE

MCK0002775

APPENDIX E
SURVEY INFORMATION

MCK0002776



Consulting Engineers

HARDING LAWSON

McKESSON CORP. SITE

SORENSEN AVENUE, SANTA FE SPRINGS, CA

Basis of Bearings: Centerline of Santa Fe Springs Road North 39°59'00" East, as shown on CSB (County Survey Book), 1435-5 A2, County of Los Angeles.

Five Additional CPT Points 9/12/91

| | <u>Northing (X)</u> | <u>Easting (Y)</u> | <u>Finish
Surface
Elevations</u> | <u>Top of
Casing</u> |
|-------|---------------------|--------------------|--|--------------------------|
| MW-1 | 4,097,050 | 4,268,800 | 149.08 | 148.52 |
| MW-2 | 4,097,223 | 4,269,057 | 147.67 | 147.28 |
| MW-3 | 4,097,362 | 4,268,552 | 149.70 | 149.03 |
| SB-1 | 4,097,284 | 4,269,072 | 147.64 | |
| SB-2 | 4,097,297 | 4,269,017 | 147.82 | |
| SB-3 | 4,097,303 | 4,268,948 | 147.17 | |
| SB-4 | 4,097,290 | 4,268,908 | 147.22 | 146.65 |
| SB-5 | 4,097,322 | 4,268,844 | 148.10 | |
| SB-6 | 4,097,363 | 4,268,670 | 148.20 | |
| SB-7 | 4,097,371 | 4,268,651 | 148.17 | 147.77 |
| SB-8 | 4,097,368 | 4,268,597 | 149.58 | |
| SB-9 | 4,097,396 | 4,268,576 | 147.70 | |
| SB-10 | 4,097,251 | 4,268,572 | 149.88 | 149.44 |
| SB-11 | 4,097,097 | 4,268,588 | 149.89 | |
| SB-12 | 4,097,089 | 4,269,065 | 145.84 | |
| SB-13 | 4,097,124 | 4,268,870 | 148.02 | 147.62 |
| SB-14 | 4,097,105 | 4,268,716 | 149.15 | |
| SB-15 | 4,097,149 | 4,268,729 | 148.85 | |
| SB-16 | 4,097,083 | 4,268,661 | 148.11 | |
| SB-18 | 4,097,143 | 4,268,629 | 148.45 | |
| SB-19 | 4,097,161 | 4,268,682 | 149.05 | |
| SB-20 | 4,097,194 | 4,268,599 | 149.83 | 149.52 |
| SB-21 | 4,097,252 | 4,268,604 | 148.05 | |
| SB-24 | 4,097,245 | 4,268,781 | 148.04 | |
| SB-25 | 4,097,211 | 4,268,822 | 148.47 | 147.84 |
| SB-26 | 4,097,199 | 4,268,874 | 147.92 | |
| SB-27 | 4,097,296 | 4,268,849 | 147.56 | |
| SB-30 | 4,097,291 | 4,268,786 | 147.68 | |
| SB-32 | 4,097,294 | 4,269,048 | 147.64 | 147.61 |
| SS-1 | 4,097,338 | 4,268,903 | 145.90 | |
| SS-2 | 4,097,345 | 4,268,932 | 142.80 | |
| SS-3 | 4,097,347 | 4,268,922 | 143.19 | |
| SS-4 | 4,097,344 | 4,268,925 | 143.95 | |

MCK0002777

HARDING LAWSON
McKESSON CORP. SITE
SORENSEN AVENUE, SANTA FE SPRINGS, CA

Page 2

| | <u>Northing (X)</u> | <u>Easting (Y)</u> | <u>Finish
Surface
Elevations</u> | <u>Top of
Casing</u> |
|------------|---------------------|--------------------|--|--------------------------|
| MK SB 17 | 4,097,124 | 4,268,625 | 149.01 | 148.63 |
| MK SB 17-A | 4,097,125 | 4,268,587 | 149.80 | 149.56 |
| MK SB 17-B | 4,097,117 | 4,268,586 | 149.90 | 149.51 |
| MK SB 23 | 4,097,243 | 4,268,727 | 148.60 | 149.16 |
| MK SB 23-A | 4,097,209 | 4,268,720 | 148.80 | 148.43 |
| MK SB 23-B | 4,097,212 | 4,268,703 | 148.80 | 148.47 |
| MK SB 33 | 4,097,257 | 4,268,642 | 148.60 | |
| MK SB 34 | 4,097,177 | 4,268,619 | 149.10 | |
| MK SB 35 | 4,097,208 | 4,268,625 | 148.60 | |
| MK SB 36 | 4,097,351 | 4,268,808 | 147.60 | 147.26 |
| MK SB 37 | 4,097,272 | 4,268,744 | 148.50 | 149.30 |
| MK SB 38 | 4,097,289 | 4,268,667 | 149.00 | |
| MK SB 39 | 4,097,336 | 4,268,765 | 148.50 | |
| MK SB 40 | 4,097,327 | 4,268,816 | 148.20 | |
| MK SB 41 | 4,097,304 | 4,268,813 | 147.90 | |
| MK SB 42 | 4,097,314 | 4,268,873 | 148.00 | |
| CPT 1 | 4,097,049 | 4,268,804 | 149.02 | |
| CPT 2 | 4,097,201 | 4,268,904 | 147.94 | |
| CPT 3 | 4,097,319 | 4,268,850 | 148.14 | |
| CPT 4 | 4,097,317 | 4,268,656 | 148.94 | |
| CPT 5 | 4,097,050 | 4,268,588 | 150.58 | |
| CPT 6 | 4,097,285 | 4,269,068 | 147.42 | |
| MK CPT 7 | 4,097,421 | 4,268,886 | 146.53 | |
| MK CPT 8 | 4,097,452 | 4,268,766 | 146.71 | |
| MK CPT 9 | 4,097,456 | 4,268,660 | 146.92 | |
| MK CPT 10 | 4,096,679 | 4,268,671 | 149.37 | |
| MK CPT 11 | 4,097,104 | 4,268,025 | 151.68 | |
| MK CPT 12 | 4,097,013 | 4,268,310 | 152.21 | |
| MK CPT 13 | 4,096,975 | 4,268,481 | 152.36 | |
| MK CPT 14 | 4,097,090 | 4,268,478 | 151.64 | |
| MK CPT 15 | 4,097,172 | 4,268,305 | 151.28 | |
| MK CPT 16 | 4,097,256 | 4,268,439 | 147.33 | |
| MK CPT 17 | 4,097,425 | 4,268,379 | 147.07 | |
| MK CPT 18 | 4,097,334 | 4,268,251 | 148.72 | |

State plane coordinates obtained from Field Book 938, Page 114,
Los Angeles County.

Monument: Whittier E-6
North 4,095,189.50
East 4,268,644.62

MCK0002778

BENCH MARK:

"Los Angeles County Road Department, Bench Mark No. CY 7443."

L & BN West headwall 40.00 feet West of Centerline Sorenson Avenue and 0.25 miles Northeasterly Centerline John Street 28.00 feet South of Southern Pacific Railroad Track, marked Bench Mark.

Elevation = 148.64 feet MSL

LEG544
Revised
08/17/90
04/18/91
09/12/91
11/05/91
:MZ/RZ

Tait & Associates Job No.: SP2374
Harding-Lawson Job No.: 1733,153.11

MCK0002779

APPENDIX F
WELL DEVELOPMENT FORMS

MCK0002781

WELL DEVELOPMENT SUMMARY

WELL MK-MW-01

DEPTH 70.25

SCREENED INTERVAL _____

SLOT SIZE 0.02"

GRAVEL PACK Monterey #3

DATE 7-26-90

TIME 11:30

DEVELOPMENT METHOD Surge, bail & pump

FIELD SUPERVISION BY Tom Harder

CHECKED BY B.C. 7/27/90

| TIME SINCE DEVELOPMENT STARTED (minutes) | ESTIMATED DISCHARGE (gpm) | EC (umhos/cm) | pH | TEMPERATURE (°C) | SOLIDS (%) | DEPTH TO WATER (feet) | COMMENTS |
|--|---------------------------|-----------------|-------------------------------|------------------|------------|-----------------------|---------------------------------|
| 0 | 4 ^(bail) gpm | 880 | 7.10 | 24.9 | | 47.87 | opaque light brown |
| 6 | 4 | 900 | 7.11 | 24.7 | | | " |
| 11 | | | | | | | stopped pumping & out of gas |
| 15 | | | | | | | Resumed bailing |
| 16 | 4 | 900 | 7.11 | 25.1 | | | opaque light brown |
| 20 | 4 | 910 | 7.13 | 24.6 | | | " |
| 22 | | | | | | | |
| 28 | | | | | | | Stopped bailing to surge |
| 33 | 4 | 890 | 7.14 | 24.1 | | | Finished surging, began bailing |
| 39 | 4 | 840 | 7.23 | 24.0 | | | opaque light brown |
| | Stopped | bailing to hook | | | | | " |
| | Approx | 85 | gallons purged to this point. | | | | |
| 50 | | | | | | | submersible pump |
| 53 | 10 gpm | 820 | 7.16 | 25.4 | | | Began pumping |
| 58 | 10 gpm | 870 | 7.05 | 25.3 | | | opaque light brown |
| 61 | 10 gpm | 730 | 7.01 | 24.8 | | | clear |
| | | | | | | | clear |

INSTRUMENT NO. _____



Harding Lawson Associates
Engineers, Geologists
& Geophysicists

McKesson Corporation Property
Santa Fe Springs, California

MCK0002782

PLATE

F1

DRAWN

JOB NUMBER
17333,168.11

APPROVED
TAK

DATE
1/92

REVISED

DATE

WELL DEVELOPMENT SUMMARY

WILL MK-MW-01

DEPTH 70.25

SCREENED INTERVAL.

PLOT SIZE 0.02

GRAVEL PACK Monterey #3

7-26-90

111-11-

DEVELOPMENTAL METHOD

FIELD SUPERVISION BY

CHECKED BY

[illegible]

MCK0002783



Harding Lawson Associates
Engineers, Geologists
& Geophysicists

**McKesson Corporation Property
Santa Fe Springs, California**

F1a

$D = A \vee N$

JOB NUMBER
17333,168.11

APPROVED
TAK

DATE
1/92

REVISÉ

DATE _____

2/2/60

will 14K-MW-12.

11 vii 17.26.90

08.06

DEVELOPMENT AND BAIL & SURETY

FIELD SUPERVISION BY Tom Harder

CHECKED BY 89.C 7(27/90)

will AK-MW-12.

69.85

VARIATION IN THE...

SLOT SIZE 0.02

GRAVEL PACK Monterey #3

[illegible]

MCK0002784



Engineers Geologists
& Geophysicists

**McKesson Corporation Property
Santa Fe Springs, California**

F2

DEATH

JOB NUMBER
17333,168.11

APPROVED
74K

DATE
1/92

REVISÉ

DATE _____

WELL DEVELOPMENT SUMMARY

WELL MK-MW-03DEPTH 69.87

SCREENED INTERVAL _____

SLOT SIZE 0.02GRAVEL PACK Monterrey #3DATE 7-26-90TIME 13:57DEVELOPMENT METHOD Surge, bail, & pumpFIELD SUPERVISION BY Tom HarderCHECKED BY RC 7/27/90

| TIME SINCE
DEVELOPMENT
STARTED
(minutes) | ESTIMATED
DISCHARGE
(gpm) | FC
(inches/cm) | pH | TEMPERATURE
(°C) | SOLIDS
(%) | DEPTH
TO
WATER
(feet) | COMMENTS |
|---|---------------------------------|-------------------|------|---------------------|---------------|--------------------------------|-----------------------------------|
| 0 | | | | | | 48.24 | Began Surging |
| 6 | | | | | | | Finished Surging |
| 7 | 4 | 800 | 7.15 | 26.4 | | | Began bailing, opaque-brown |
| 11 | 4 | 870 | 7.18 | 24.1 | | | opaque brown |
| 21 | 4 | 910 | 7.13 | 23.3 | | | " |
| 23 | | | | | | | Stopped bailing, began Surging |
| 27 | | | | | | | Finished Surging, resumed bailing |
| 29 | 4 | 890 | 7.21 | 23.4 | | | opaque brown |
| 34 | 4 | 970 | 7.18 | 23.5 | | | " |
| 37 | | | | | | | Finished bailing |
| 50 | | | | | | | Begin pumping |
| 52 | 10 gpm | 800 | 7.29 | 24.0 | | | opaque brown |
| 57 | 10 gpm | 900 | 7.27 | 23.8 | | | murky brown |
| 66 | " | 920 | 7.12 | 23.6 | | | almost clear |
| 70 | " | 840 | 7.13 | 23.6 | | | clear |
| 74 | " | 850 | 7.17 | 23.8 | | | " |
| 7TH | | | | | | | |

INSTRUMENT NO.



Harding Lawson Associates
Engineers, Geologists
& Geophysicists

McKesson Corporation Property
Santa Fe Springs, California

MCK0002785

PLATE

F3

DRAWN

JOB NUMBER
17333,168.11

APPROVED
TAK

DATE
1/92

REVISED

DATE

WELL DEVELOPMENT SUMMARY

WELL MK-MW-03

DEPTH 69.87

SCREENED INTERVAL

SLOT SIZE 0.02"

GRAVEL PACK Monterey #3

DATE 7-26-90

Y 118-918

DEVELOPMENT METHOD

FIELD SUPERVISION BY Tom Harder

CHECKED BY

[illegible]

MCK0002786

PLATE

F3a



Harding Lawson Associates
Engineers, Geologists
& Geophysicists

McKesson Corporation Property
Santa Fe Springs, California

DRAWN

JOB NUMBER
17333,168.11

APPROVED
TAX

DATE
1/92

REVISÉ

DATE _____

WELL DEVELOPMENT SUMMARY

WELL MK-28-4DEPTH 63.9SCREENED INTERVAL 43.5-63.5 ftSLOT SIZE 0.02 inchGRAVEL PACK Monterey #3DATE 7-30-90TIME 0758DEVELOPMENT METHOD Surge, bail, ~~plug~~ pumpFIELD SUPERVISION BY Tom HarderCHECKED BY BC 7/31/90

| TIME SINCE
DEVELOPMENT
STARTED
(minutes) | ESTIMATED
DISCHARGE
(gpm) | EC
(umhos/cm) | pH | TEMPERATURE
(°C) | SOLIDS
(%) | DEPTH
TO
WATER
(feet) | COMMENTS |
|---|---------------------------------|------------------|---------|---------------------|---------------|--------------------------------|--------------------------------|
| 0 | | | | | | 44.36 | Began surging |
| 10 | | | | | | | Finished surging |
| 12 | 4 gpm | 960 | 7.14 | 22.5 | | | Began bailing: opaque h. brn |
| 17 | " | 1000 | 7.22 | 22.4 | | | Opaque brown |
| 20 | " | 920 | 7.29 | 22.5 | | | " |
| 22 | " | 910 | 7.28 | 22.5 | | | " |
| 25 | " | 930 | 7.29 | 22.5 | | | " |
| 28 | | | | | | | Stopped bailing; began surging |
| 33 | | | | | | | Stopped surging |
| 35 | 4 gpm | 840 | 7.27 | 22.6 | | | Began bailing: opaque brown |
| 38 | " | 870 | 7.28 | 22.6 | | | Opaque brown |
| 41 | " | 900 | 7.25 | 22.6 | | | " |
| 43 | " | 870 | 7.29 | 22.6 | | | " |
| | | | | | | | Stopped bailing |
| 52 | 10 gpm | 900 | 7.22 | 23.2 | | | Began pumping: opaque brn |
| 55 | " | 860 | 7.18 | 22.8 | | | Translucent brown |
| INSTRUMENT NO. 092088 | | SN 7846 | SN 7846 | SN 7846 | | | |

MCK0002787



Harding Lawson Associates
Engineers, Geologists
& Geophysicists

McKesson Corporation Property
Santa Fe Springs, California

PLATE

F4

DRAWN

JOB NUMBER
17333,168.11

APPROVED
THK

DATE
1/92

REVISED

DATE

WELL DEVELOPMENT SUMMARY

WELL MK-SB-7DEPTH 63.39SCREENED INTERVAL 43.5-63.5 ftSLOT SIZE 0.02 inchGRAVEL PACK Monterrey #3DATE 7-30-90TIME 09:51DEVELOPMENT METHOD Surge, bail, pumpFIELD SUPERVISION BY Tom HarderCHECKED BY 7/31/90 BC

| TIME SINCE
DEVELOPMENT
STARTED
(minutes) | ESTIMATED
DISCHARGE
(gpm) | EC
(umhos/cm) | pH | TEMPERATURE
(°C) | SOLIDS
(%) | DEPTH
TO
WATER
(feet) | COMMENTS |
|---|---------------------------------|------------------|------|---------------------|---------------|--------------------------------|-----------------------------|
| 0 | | | | | | 44.36 | Began Surging |
| 5 | | | | | | 46.69 | Finished Surging |
| 7 | 4 gpm | 840 | 7.28 | 22.6 | | | Started bailing, opaque brn |
| 11 | " | 910 | 7.32 | 22.5 | | | Opaque brown |
| 13 | " | 840 | 7.33 | 22.6 | | | " |
| 16 | " | 920 | 7.32 | 22.4 | | | " |
| 18 | " | 860 | 7.38 | 22.5 | | | " |
| 20 | " | 890 | 7.38 | 22.4 | | | " |
| 21 | | | | | | | End bailing |
| 26 | | | | | | | Began Surging |
| 27 | 4 gpm | 870 | 7.32 | 22.7 | | | End Surging |
| 30 | | 870 | 7.34 | 22.6 | | | Begin bailing, opaque brn |
| 32 | " | 900 | 7.33 | 22.5 | | | Opaque brown |
| 35 | " | 910 | 7.39 | 22.5 | | | " |
| 63 | 10 gpm | 830 | 7.33 | 24.5 | | | " |
| 66 | " | 880 | 7.31 | 23.4 | | | End bailing |
| | | | | | | | Began pumping, opaque brn |
| | | | | | | | Murky brown |

INSTRUMENT NO.

092088 SN 7846 SN 7846



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MCK0002789

PLATE

F5

DRAWN

JOB NUMBER
17333,168.11

APPROVED
THC

DATE
1/92

REVISED

DATE

WELL MK-SB-7

WELL MK-SB-7

DEPTH 63.39'

SCREENED INTERVAL 43.5-63.5 ft

SLOT SIZE 0.02 inch

GRAVEL PACK Monterey #3

DATE 7-30-90

TIME

DEVELOPMENT METHOD surge, bail, i pump

FIELD SUPERVISION BY Tom Harder

CHECKED BY

[illegible]

| | | | |
|----------------|--------|----------|----------|
| INSTRUMENT NO. | 092088 | S/N 7846 | S/N 7846 |
|----------------|--------|----------|----------|

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PLATE

F5a

1 of 2

WELL DEVELOPMENT SUMMARY

WELL NK-SB-10DATE 7-27-90DEPTH 64.93TIME 0823SCREENED INTERVAL 45-65 feetDEVELOPMENT METHOD Surge, bail & pumpFIELD SUPERVISION BY Tom HarderSLOT SIZE 0.02 inchGRAVEL PACK Monterey #3CHECKED BY BC 7/27/90

| TIME SINCE
DEVELOPMENT
STARTED
(minutes) | ESTIMATED
DISCHARGE
(gpm) | EC
(umhos/cm) | pH | TEMPERATURE
(°C) | SOLIDS
(%) | DEPTH
TO
WATER
(feet) | COMMENTS |
|---|---------------------------------|------------------|------|---------------------|---------------|--------------------------------|------------------------------------|
| 0 | | | | | | 48.80 | Began Surging |
| 6 | | | | | | | Finished Surging |
| 9 | 4 gpm | 930 | 7.34 | 22.6 | | | Started bailing - Opaque lt. brown |
| 14 | " | 880 | 7.29 | 22.4 | | | Opaque light brown |
| 19 | " | 840 | 7.29 | 22.4 | | | " |
| 23 | | | | | | | Stopped bailing |
| 24 | | | | | | | Began Surging |
| 28 | | | | | | | Finished Surging |
| 30 | | | | | | | Began bailing |
| 31 | 4 gpm | 910 | 7.36 | 22.7 | | | Opaque lt. brown |
| 36 | 4 gpm | 860 | 7.36 | 22.4 | | | " |
| 37 | | | | | | | Stopped bailing - 48.5 feet |
| 51 | | | | | | | Began pumping |
| 52 | 10 gpm | 830 | 7.33 | 23.4 | | | Opaque Lt. Brown |
| 55 | " | 880 | 7.24 | 23.0 | | | Translucent Lt. Brown |
| 57 | " | 880 | 7.20 | 23.0 | | | " |
| INSTRUMENT NO. 092088 | | | | | | | 5/18/46 5/17846 |



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F6

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DATE

WELL DEVELOPMENT SUMMARY

Will. MK-SB-10

DEPTH 64.93

SCREENED INTERVAL 45-65 ft.

SLOT SIZE 0.02

GRAVEL PACK Monterey #3

DATE 7-27-90

TIME.

DEVELOPMENT METHOD Surge, bail, & pump

FIELD SUPERVISION BY Tom Harder

CHECKED BY

[illegible]

INSTRUMENT NO.

MCK0002792

PLATE

F6a



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DATE _____

WELL DEVELOPMENT SUMMARY

WELL MK-SB-13DEPTH 62.08SCREENED INTERVAL 42.5-62.5SLOT SIZE 0.02 inchGRAVEL PACK Monterey #3DATE 7-27-90TIME 15:29DEVELOPMENT METHOD Surge, bail, & pumpFIELD SUPERVISION BY Tom HarderCHECKED BY BC #30/90

| TIME SINCE
DEVELOPMENT
STARTED
(minutes) | ESTIMATED
DISCHARGE
(gpm) | EC
(umhos/cm) | pH | TEMPERATURE
(°C) | SOLIDS
(%) | DEPTH
TO
WATER
(feet) | COMMENTS |
|---|---------------------------------|------------------|---------|---------------------|---------------|--------------------------------|------------------------------------|
| 0 | | | | | | 46.08 | Start ^{7th} subab surging |
| 6 | 4 gpm | 780 | 7.06 | 24.5 | | | Stop surging, begin bailing |
| 10 | " | 900 | 7.20 | 23.7 | | | Opaque brown |
| 13 | " | 920 | 7.20 | 23.3 | | | " |
| 15 | " | 920 | 7.23 | 23.5 | | | " |
| 19 | " | 900 | 7.25 | 23.4 | | | " |
| 23 | | | | | | | stop bailing |
| 26 | | | | | | | Began surging |
| 27 | 4 gpm | 920 | 7.13 | 23.5 | | | Finished surging |
| 31 | " | 920 | 7.17 | 23.7 | | | Began bailing: Opaque brown |
| 33 | | | | | | | Opaque brown |
| 42 | 10 gpm | 890 | 7.19 | 24.2 | | | Stopped bailing |
| 46 | " | 880 | 7.21 | 23.8 | | | Began pumping: Opaque brown |
| 49 | " | 860 | 7.18 | 23.8 | | | Murky brown |
| 51 | " | 890 | 7.14 | 23.8 | | | " |
| 54 | " | 910 | 7.15 | 23.9 | | | " |
| | | | | | | | slightly murky |
| INSTRUMENT NO. | | 092088 | SN 1846 | SN 1846 | | | |



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PLATE

F7

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JOB NUMBER
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1/92

REVISED

DATE

WELL MK-2B-13

DEPTH 63.08

SCREENED INTERVAL 42.5-62.5

SLOT SIZE 0.02 inch

GRAVEL PACK #3 Monterey

DATE 7-27-90

TIME

DEVELOPMENT METHOD Surge, bail & pump

FIELD SUPERVISION BY Tom Harder

CHECKED BY

| TIME SINCE
DEVELOPMENT
STARTED
(minutes) | ESTIMATED
DISCHARGE
(gpm) | EC
(umhos/cm) | pH | TEMPERATURE
(°C) | SOLIDS
(%) | DEPTH
TO
WATER
(feet) | COMMENTS |
|---|---------------------------------|------------------|------|---------------------|---------------|--------------------------------|---------------------|
| 58 | 10 gpm | 1147.9/0 | 7.10 | 23.8 | | | Almost clear |
| 61 | " | 880 | 7.18 | 23.8 | | | clear |
| 64 | " | 880 | 7.21 | 23.9 | | | " : end pumping |
| | | | | | | 46.27 | ~385 gallons purged |
| | | | | | | | |
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| INSTRUMENT NO. 092088 | | SN 7846 | | SN 7846 | | SN 7846 | |

MCK0002794



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F7a

1 of 2

WELL DEVELOPMENT SUMMARY

WELL MK-SB-17DEPTH 63.80SCREENED INTERVAL 45-65 ftSLOT SIZE 0.02 inchGRAVEL PACK Monticrey #3DATE 7-27-90TIME 13:32DEVELOPMENT METHOD Surge, bail & pumpFIELD SUPERVISION BY Tom HarderCHECKED BY 7/30/90 JH

| TIME SINCE
DEVELOPMENT
STARTED
(minutes) | ESTIMATED
DISCHARGE
(gpm) | EC
(umhos/cm) | pH | TEMPERATURE
(°C) | SOLIDS
(%) | DEPTH
TO
WATER
(feet) | COMMENTS |
|---|---------------------------------|------------------|------|---------------------|---------------|--------------------------------|------------------------------------|
| 0 | | | | | | 48.13 | Began surging |
| 4 | | | | | | | End surging |
| 5 | 4 gpm | 900 | 7.12 | 25.2 | | | Began bailing, opaque lt. brn |
| 10 | " | 880 | 7.12 | 24.2 | | | Opaque lt. brown |
| 18 | " | 960 | 7.16 | 23.8 | | | " " |
| 21 | " | 850 | 7.13 | 23.8 | | | " " |
| 23 | " | 920 | 7.11 | 23.4 | | | Opaque lt. brown - stopped bailing |
| 24 | | 9TH | | | | | Began surging |
| 30 | | | | | | | End surging - Begin bailing |
| 33 | 4 gpm | 900 | 7.16 | 24.1 | | | Opaque lt. brown |
| 38 | " | 900 | 7.12 | 23.5 | | | Translucent brown TH |
| 39 | | | | | | | End bailing: ~75 gallons bailed |
| 46 | 10 gpm | 920 | 7.08 | 25.0 | | | Begin pumping, translucent |
| 49 | " | 880 | 6.99 | 24.2 | | | TH Murky |
| 51 | " | 910 | 6.86 | 24.1 | | | Almost clear |
| 56 | " | 870 | 6.89 | 24.0 | | | Clear |
| INSTRUMENT NO. 092088 S/N 7846 S/W 7846 | | | | | | | |

MCK0002795

ATF

F8



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JOB NUMBER
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DATE

WELL MK-SB-17

DEPTH 63.80

SCREENED INTERVAL 45-65 fy

SLOT SIZE 0.02 inch

GRAVEL PACK #3 Monterey

DATE 7-27-90

TIME

DEVELOPMENT METHOD Surge, bail, & pump

FIELD SUPERVISION BY Tom Hands

CHECKED BY

[illegible]

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PLATE

F8a

WELL DEVELOPMENT SUMMARY

WELL MK-2B-17ADATE 2-1-91DEPTH 116.04TIME 13:55SCREENED INTERVAL 111-116DEVELOPMENT METHOD Treat, Surge, bail, pumpSLOT SIZE 0FIELD SUPERVISION BY Tom HarderGRAVEL PACK Monterey #3CHECKED BY B. Chodwick 2/4/91

| TIME SINCE
DEVELOPMENT
STARTED
(minutes) | ESTIMATED
DISCHARGE
(gpm) | EC
(umhos/cm) | pH | TEMPERATURE
(°C) | SOLIDS
(%) | DEPTH
TO
WATER
(feet) | #
COMMENTS |
|---|---------------------------------|------------------|------|---------------------|---------------|--------------------------------|---------------------------------|
| 0/13:35 | | | | | | 50.10 | Treated well w/ phosphate soln. |
| 16:08 | 15 gal | 2050 | 5.86 | 20.9 | | | Began bailing: opaque |
| TH 16:16 | 10 gal TH | | | | | | Fat H. brown |
| 16:16 | 10 gal | 1650 | 6.17 | 20.1 | | | lt. Brown, opaque |
| 16:20 | A | | | | | | Stopped bailing to set pump |
| 16:58 | 14.5 gal | 2510 | 6.06 | 19.9 | | | Began pumping: Translucent brn |
| 17:02 | 8.8 gpm/45 | 1840 | 7.00 | 19.8 | | 51.68 | Translucent brn - no odor |
| 17:11 | 9.5/130.5 | 1970 | 7.25 | 19.1 | | | Murky brn |
| 17:17 | 9.5/187.5 | 1990 | 7.30 | 17.5 | | 51.65 | Murky - No odor - no OVA |
| 17:28 | 9.5/292 | 1920 | 7.21 | 18.3 | | | slightly murky |
| 17:35 | 9.5/358.2 | 1970 | 7.27 | 19.4 | | 51.64 | " " |
| 17:43 | 9.5/434 | 1940 | 7.32 | 19.6 | | | " " |
| 17:51 | 9.5/510 | 2010 | 7.37 | 17.4 | | 51.64 | |
| 18:00 | 9.5/595.5 | 1990 | 7.07 | 18.7 | | 51.64 | slightly murky |
| | | | | | | | End development |
| | | | | | | | Total Surge Vol.
595.5 gals |
| INSTRUMENT NO. 9005 | | 320 | 7901 | 320 | | | |

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PLATE

F9

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17333,168.11

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DATE

WELL MK-SB-17B

DEPTH 85.74

SCREENED INTERVAL 80.74 - 85.74

SLOT SIZE 0.02 inch

GRAVEL PACK Monterey #3

DATE 2-1-91

TIME 15:00

DEVELOPMENT METHOD Treat, Surge, bail

FIELD SUPERVISION BY Tom Harder

CHECKED BY B. Chedwick 2/9/91

| TIME SINCE DEVELOPMENT STARTED (minutes) | ESTIMATED DISCHARGE (gpm) | EC (umhos/cm) | pH | TEMPERATURE ($^{\circ}$ C) | SOLIDS (%) | DEPTH TO WATER (feet) | COMMENTS |
|--|---------------------------|----------------|------|-----------------------------|------------|-----------------------|---|
| 0/1500 | | | | | | 50.27 | Began treating well |
| 1553 | | | | | | | Finished Surging well |
| 1715 | 15 gal | 2950 | 5.76 | 20.2 | | | Began bailing, opaque lt. brown - no odor |
| 1730 | 30 gal | | | | | 78.68 | Well going dry - stopped bailing |
| 1750 | | | | | | | Resumed bailing |
| 1755 | 20 gal | 1230 | 6.47 | 20.4 | | | Opaque brown |
| 1758 | 55 gal | 1260 | 6.41 | 20.5 | | | " " |
| 1800 | | | | | | 77.34 | Stopped bailing. |
| | | | | | | | |
| | | | | | | | Total Purge Vol.
= 55 gals |
| | | | | | | | |
| | | | | | | | |
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| | | | | | | | |
| | | INSTRUMENT NO. | 7005 | SN
7701 | SN
7901 | | |

MCK0002798



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PLATE

F10

1 of 2

WELL DEVELOPMENT SUMMARY

WELL MK-5B-20

DATE 7-27-90

DEPTH 63.78

TIME 10:41

SCREENED INTERVAL 43.5 - 63.5 ft.

DEVELOPMENT METHOD Surge, bail, pump

FIELD SUPERVISION BY Tom Harder

SLOT SIZE 0.02 inch

GRAVEL PACK Monterey #3

CHECKED BY BC 7/30/90

| TIME SINCE
DEVELOPMENT
STARTED
(minutes) | ESTIMATED
DISCHARGE
(gpm) | EC
(umhos/cm) | pH | TEMPERATURE
(°C) | SOLIDS
(%) | DEPTH
TO
WATER
(feet) | COMMENTS |
|---|---------------------------------|-----------------------|------|---------------------|---------------|--------------------------------|--------------------------------|
| 0 | | | | | | 48.94 | Began Surging |
| 6 | | | | | | | Finished surging |
| 7 | | | | | | | Began bailing |
| 8 | 4 gpm | 900 | 7.02 | 23.0 | | | Opaque lt. brown |
| 12 | " | 820 | 7.18 | 26.0 | | | " " |
| 24 | | | | | | | Stopped bailing |
| 28 | | | | | | | Began Surging |
| 30 | | | | | | | Stopped Surging |
| 33 | 4 gpm | 920 | 7.08 | 23.8 | | | Opaque lt. brown |
| 35 | | | | | | | Stopped bailing 60 gal surge |
| 43 | 10 gpm | 880 | 7.14 | 23.9 | | | Began pumping - opaque lt. brn |
| 48 | 10 gpm | 900 | 7.04 | 24.1 | | | murky brown |
| 50 | " | 880 | 7.01 | 23.6 | | | almost clear |
| 53 | " | 920 | 7.05 | 24.7 | | | clear |
| 56 | " | 880 | 7.02 | 24.0 | | | clear |
| 60 | " | 900 | 7.05 | 23.7 | | | " |
| | | INSTRUMENT NO. 092088 | | SAN 1846 | | J/N 1846 | |

MCK0002799



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PLATE

F11

DRAWN

JOB NUMBER
17333,168.11

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DATE
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GRAVEL PACK #3 Monterey

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DEVELOPMENT METHOD Surge, bail, & pump
FIELD SUPERVISION BY 10m Harder

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| TIME SINCE DEVELOPMENT STARTED (minutes) | ESTIMATED DISCHARGE (gpm) | TC (umhos/cm) | pH | TEMPERATURE (°C) | SOLIDS (%) | DEPTH TO WATER (feet) | COMMENTS |
|--|---------------------------|---------------|------|------------------|------------|-----------------------|---------------------------------------|
| 63 | 16.9 gpm | 900 | 7.04 | 23.8 | | | Clear |
| 66 | " | 820 | 7.04 | 23.7 | | | " |
| 67 | | | | | | 49.03 | Stopped pumping
385 gallons purged |
| | | | | | | | |
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| INSTRUMENT NO. 092088 | | SN 7846 | | SN 7846 | | | |

MCK0002800

P. 4-3

F11a



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WELL DEVELOPMENT SUMMARY

WELL AK-2B-23DEPTH 64.70SCREENED INTERVAL 45-65 ftSLOT SIZE 0.02 inchGRAVEL PACK Monterey #3DATE 7-30-90TIME 12:31DEVELOPMENT METHOD Surge, bail, pumpFIELD SUPERVISION BY Tom HarderCHECKED BY BC 7/31/90

33.4

| TIME SINCE
DEVELOPMENT
STARTED
(minutes) | ESTIMATED
DISCHARGE
(gpm) | EC
(umhos/cm) | pH | TEMPERATURE
(°C) | SOLIDS
(%) | DEPTH
TO
WATER
(feet) | COMMENTS |
|---|---------------------------------|------------------|----------------|---------------------|---------------|--------------------------------|-----------------------------|
| 0 | | | | | | 18.09 | Began Surging |
| 5 | | | | | | | End surging |
| 6 | 4 gpm | 1000 | 7.35 | 26.5 | | | Began bailing: opaque brown |
| 15 | " | 900 | 7.25 | 24.4 | | | opaque brown |
| 21 | " | 980 | 7.18 | 23.9 | | | " |
| 26 | " | 1000 | 7.22 | 24.2 | | | " " End bailing |
| 27 | | | | | | | Begin Surging |
| 31 | | | | | | | End surging |
| 43 | 4 gpm | 1000 | 7.17 | 25.6 | | | Began bailing: opaque brown |
| 47 | 4 gpm | 960 | 7.12 | 24.5 | | | opaque brown: end bailing |
| 57 | 10 gpm | 980 | 7.18 | 26.2 | | | Began pumping: opaque brown |
| 60 | " | 1020 | 7.14 | 24.9 | | | translucent |
| 63 | " | 1020 | 7.13 | 24.7 | | | " |
| 65 | " | 1020 | 7.01 | 24.4 | | | THH Murky brown |
| 67 | " | 1000 | 7.02 | 24.6 | | | " |
| 70 | " | 1000 | 7.03 | 24.1 | | | " |
| INSTRUMENT NO. <u>092088</u> | | <u>SN 7846</u> | <u>SN 7846</u> | <u>SN 7846</u> | | | |



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PLATE

F12

DRAWN

JOB NUMBER
17333,168.11

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DATE
1/92

REVISED

DATE

WELL AK-5B-23

DEPTH 64.70

SCREENED INTERVAL 45-65 ft

SLOT SIZE 0.02 inch

GRAVEL PACK Monterrey #3

DATE 1-30-90

TIME

DEVELOPMENT METHOD

FIELD SUPERVISION BY

CHECKED BY

[illegible]

INSTRUMENT NO.

| | |
|-------------|-------------|
| 9/28/81 N/S | 9/28/81 S/N |
|-------------|-------------|

| | |
|-------------|-------------|
| 9/28/81 N/S | 9/28/81 S/N |
|-------------|-------------|

MCK0002802



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PLATE

F12a

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DATE _____

WELL DEVELOPMENT SUMMARY

WELL MK-SB-23A

DATE 2-7-91

DEPTH 127.82

TIME 0844

SCREENED INTERVAL 122.82 - 127.82

DEVELOPMENT METHOD Treat surge, bail, pump

SLOT SIZE 0.02 inch

FIELD SUPERVISION BY Tom Harder

GRAVEL PACK Monterey #3

CHECKED BY B. Christensen 2/8/91

| TIME SINCE DEVELOPMENT STARTED (minutes) | ESTIMATED DISCHARGE (gpm) | EC (umhos/cm) | pH | TEMPERATURE (°C) | SOLIDS (%) | DEPTH TO WATER (feet) | COMMENTS |
|--|---------------------------|----------------|------|------------------|------------|-----------------------|--------------------------------------|
| 0/0844 | | | | | | 48.14 | Began treating well/added |
| 14/0847 | | | | | | | 5 gal of S.A.P.P. |
| 3/0847 | | | | | | | Began surging well |
| 48/0932 | | | | | | | Stopped surging |
| 114/1038 | ~5 gal | 2230 | 6.78 | 21.0 | 10% | | Began bailing - opaque brownish odor |
| 119/1043 | ~10 gal | 2080 | 6.44 | 20.8 | 10% | | Translucent brown |
| 124/1048 | ~20 gal | 2040 | 6.51 | 21.3 | 5-10% | | Stopped bailing |
| 126/1050 | ~25 gal | | | | | | Translucent brown Began pumping |
| 154/1118 | 9 gpm/25 | 2230 | 6.82 | 22.6 | 3% | 50.29 | mucky, |
| 161/1125 | 9 gpm/97 | 2200 | 7.21 | 21.9 | 21% | 50.31 | mucky |
| 166/1130 | 9/142 | 2100 | 7.19 | 21.9 | " | | mucky |
| 171/1135 | 9/187 | 2200 | 7.22 | 22.2 | " | 50.20 | mucky |
| 181/1145 | 11/213 | 2180 | 7.27 | 22.3 | " | | " |
| 191/1155 | 7.5/327 | 2320 | 7.27 | 22.2 | " | 50.10 | clear |
| 201/1205 | 7.5/402 | 2250 | 7.25 | 22.8 | " | 50.11 | " |
| 211/1215 | 7.5/477 | 2206 | 7.27 | 22.5 | " | 50.10 | " |
| 221/1225 | 7.5/552 | 2170 | 7.27 | 22.1 | " | 50.10 | " END OF DEVELOPMENT |
| INSTRUMENT NO. <u>9005</u> | | pH <u>7.27</u> | | TEMP <u>22.1</u> | | DEPTH <u>50.10</u> | |
| | | pH <u>7.27</u> | | TEMP <u>22.1</u> | | DEPTH <u>50.10</u> | |



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PLATE

F13

DRAWN

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Page 1 of 2

WELL DEVELOPMENT SUMMARY

WELL MK-SB-23ADEPTH 95.43SCREENED INTERVAL 90.2-95.43-95.43SLOT SIZE 0.02 inchGRAVEL PACK Monterey #3DATE 2-7-91TIME 1200DEVELOPMENT METHOD Treat, surge, bail, pumpFIELD SUPERVISION BY Tom HarderCHECKED BY B. Chardwick 2/8/91

| TIME SINCE
DEVELOPMENT
STARTED
(minutes) | ESTIMATED
DISCHARGE
(gpm) | EC
(umhos/cm) | pH | TEMPERATURE
(°C) | SOLIDS
(%) | DEPTH
TO
WATER
(feet) | COMMENTS |
|---|---------------------------------|------------------|------|---------------------|---------------|--------------------------------|---------------------------------|
| 0/1200 | | | | | | 49.57 | surging |
| 30/1230 | | | | | | | Treated and began bailing |
| 66/1236 | 5 gal | 1930 | 6.63 | 22.5 | 10% | | Finished surging |
| 72/1242 | | | | | | | Began bailing opaque |
| 79/1249 | 10 gal | 3850 | 5.19 | 22.3 | 10% | | brown - no odor |
| 82/1352 | 15 gal | | | | | | Stopping bailing for repairs |
| 114/1429 | 7.5/15 | 2930 | 5.34 | 22.6 | 5-10% | | Resumed bailing / opaque |
| 125/1435 | 7.5/60 | 1830 | 6.67 | 22.1 | 1-5% | 59.36 | brown |
| 130/1440 | 7.5/97.5 | 1830 | 6.60 | 21.9 | <1% | | Finished bailing |
| 135/1445 | 7.5/134.0 | 1830 | 6.58 | 22.2 | <1% | 58.29 | Translucent brown Begin pumping |
| 140/1450 | 7.5/171.5 | 1830 | 6.67 | 21.9 | <1% | 58.26 | Marky brown no odor |
| 145/1455 | 7.5/209 | 1840 | 6.76 | 22.0 | <1% | 58.29 | " |
| 150/1500 | 7.5/246.5 | 1850 | 6.62 | 21.9 | <1% | | " |
| 160/1510 | 7.5/321.5 | 1860 | 6.72 | 21.7 | <1% | 58.18 | Marky |
| | | | | | | | " |
| INSTRUMENT NO. | | 9005 | 7846 | 7846 | | | |



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& Geophysicists

McKesson Corporation Property
Santa Fe Springs, California

MCK0002804

PLATE

F14

DRAWN

JOB NUMBER
17333,168.11

APPROVED
THK

DATE
1/92

REVISED

DATE

WELL MK-SB-23B

DEPTH 92.43

SCREENED INTERVAL 90.43-95.43

SLOT SIZE 0.02 inch

GRAVEL PACK Monterey #3

DATE 2-7-91

TIME

DEVELOPMENT METHOD Treat, Surge, bail pump

FIELD SUPERVISION BY Tom Harder

CHECKED BY Pr 2/2/2

| TIME SINCE
DEVELOPMENT
STARTED
(minutes) | ESTIMATED
DISCHARGE
(gpm) | EC
(umhos/cm) | pH | TEMPERATURE
(°C) | SOLIDS
(%) | DEPTH
TO
WATER
(feet) | COMMENTS |
|---|---------------------------------|------------------|-------------|---------------------|---------------|--------------------------------|----------|
| 170 / 1520 | 7.5 / 365.5 | 1810 | 6.80 | 21.4 | <1% | 58.19 | Murky |
| 180 / 1530 | 7.5 / 440.5 | 1830 | 6.84 | 21.3 | <1% | 58.19 | " |
| 190 / 1540 | 7.5 / 515.5 | 1820 | 6.64 | 21.6 | <1% | 58.19 | " |
| | END | OF | DEVELOPMENT | | | | |
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| INSTRUMENT NO. | | 7005 | 8N 78416 | 3N 78416 | | | |

INSTRUMENT NO.



**Engineers, Geologists
& Geophysicists**

PLATE

F14a

DRAWN

JOB NUMBER
17333,168.11

APPROVED

THK

DATE
1/92

REVISÉ

DATE _____

WELL DEVELOPMENT SUMMARY

WELL MK-3B-25DEPTH 63.39SCREENED INTERVAL 44-64 ftSLOT SIZE 0.02 inchGRAVEL PACK Monterrey #3DATE 7-30-90TIME 14:25DEVELOPMENT METHOD Surge, bail, pumpFIELD SUPERVISION BY Tom HarderCHECKED BY 7/31/90 Bx

| TIME SINCE
DEVELOPMENT
STARTED
(minutes) | ESTIMATED
DISCHARGE
(gpm) | EC
(umhos/cm) | pH | TEMPERATURE
(°C) | SOLIDS
(%) | DEPTH
TO
WATER
(feet) | COMMENTS |
|---|---------------------------------|------------------------------|------|---------------------|---------------|--------------------------------|------------------|
| 4 | | | | | | 46.28 | Began surging |
| 5 | | | | | | | Finished surging |
| 7 | 4 gpm | 920 | 7.07 | 26.1 | | | Began bailing |
| 10 | " | 920 | 7.13 | 23.9 | | | Opaque brown |
| 12 | " | 960 | 7.18 | 24.1 | | | " |
| 16 | " | 980 | 7.17 | 24.0 | | | " |
| 19 | " | 910 | 7.19 | 24.1 | | | " |
| 21 | | | | | | | End bailing: |
| 22 | | | | | | | Start surging |
| 29 | | | | | | | Finished surging |
| 31 | | | | | | | Began bailing |
| 32 | 4 gpm | 900 | 7.30 | 24.6 | | | Opaque brown |
| 35 | " | 920 | 7.20 | 23.8 | | | " |
| 37 | " | 910 | 7.26 | 24.1 | | | " |
| 39 | " | 980 | 7.26 | 23.9 | | | " |
| | | | | | | | " : End bailing |
| | | INSTRUMENT NO. <u>092088</u> | | <u>SN 7846</u> | | <u>SN 7846</u> | |



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& Geophysicists

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Santa Fe Springs, California

MCK0002806

ATE

F15

DRAWN

JOB NUMBER
17333,168.11

APPROVED
THK

DATE
1/92

REVISED

DATE

WELL MK-SB-25

DEPTH 63.39

SCREENED INTERVAL 44-64 ft

SLOT SIZE 0.02 inch

GRAVEL PACK Monterrey #3

DATE 7-30-90

TIME

DEVELOPMENT METHOD Surge, bail, pump

FIELD SUPERVISION BY Tom Harder

CHECKED BY

| TIME SINCE DEVELOPMENT STARTED (minutes) | ESTIMATED DISCHARGE (gpm) | EC (umhos/cm) | pH | TEMPERATURE (°C) | SOLIDS (%) | DEPTH TO WATER (feet) | COMMENTS |
|--|---------------------------|--------------------|------|------------------|------------|-----------------------|-----------------------------------|
| 48 | 10 gpm | 980 | 7.27 | 25.4 | | | Began pumping - opaque brown |
| 51 | " | 950 | 7.25 | 24.2 | | | sp. Translucent brown |
| 54 | " | 980 | 7.22 | 24.2 | | | Murky brown |
| 56 | " | 870 | 7.24 | 24.3 | | | Almost clear |
| 58 | " | 960 | 7.26 | 24.1 | | | " |
| 61 | " | 1000 | 7.25 | 23.9 | | | Clear |
| 63 | " | 1000 | 7.25 | 23.7 | | | " |
| 65 | " | 960 | 7.25 | 23.9 | | | " |
| 67 | " | 1000 | 7.22 | 23.5 | | | " |
| 69 | " | 980 960 | 7.27 | 23.6 | | | " |
| 70 | | | | | | | End pumping: ~385 gallons purged. |
| | | | | | | | |
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| INSTRUMENT NO. 092088 | | SN 7846 | | SN 7846 | | | |

MCK0002807

WILL DEVELOPMENT SUMMARY

WILL MK-SB-32

39.10

SCREENED INTERVAL.

SLOT SIZE 0.02GRAVEL PACK Monterrey #311411
1-26-90

TIME 2h:07

DEVELOPMENT METHOD Surge & bail, then pump

FIELD SUPERVISION BY Tom Harder

CHECKED BY BC 7/30/90

[illegible]

MCK0002808



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Santa Fe Springs, California

PLATE

F16

JOB NUMBER
17333,168.11

APPROVED
TAL

DATE
1/92

REVISÉD

DATE _____

WELL DEVELOPMENT SUMMARY

WELL MK-SB-36DEPTH 64.83SCREENED INTERVAL 45-65SLOT SIZE 0.02 inchGRAVEL PACK Monterey #3DATE 2-1-91TIME 08:40DEVELOPMENT METHOD Surge/Bail Submersible pumpFIELD SUPERVISION BY Tom Harder/Dan JohnsonCHECKED BY 2/2/91

| TIME SINCE
DEVELOPMENT
STARTED
(minutes) | ESTIMATED
DISCHARGE
(gpm) | EC
(umhos/cm) | pH | TEMPERATURE
(°C) | SOLIDS
(%) | DEPTH
TO
WATER
(feet) | COMMENTS |
|---|---------------------------------|------------------|------|---------------------|---------------|--------------------------------|---------------------------------------|
| 0 | | | | | | | |
| 18 | | | | | | | Began Surging |
| 20 | 1.5 | 1790 | 6.71 | 21.5 | | | Finished Surging |
| 24 | 1.38 | 1630 | 7.12 | 21.0 TH | | | Began bailing - Lt. Brown |
| 28 | 38 | 1630 | ↓ | ↓ | | | Opaque, slt odor (solvent) |
| 36 | 48 | 1680 | 7.12 | 21.0 | | | Stopped to put respirators on |
| 40 | | | 7.21 | 21.2 | | | Opaque brown |
| 42 | | | | | | | " " |
| 46 | | | | | | | Stopped bailing to surge |
| 52 | | | | | | | Began Surging |
| 56 | 60 | 1530 | 7.32 | 22.1 | | | Finished Surging |
| 74 | 85 | 1660 | 7.41 | 22.0 | | | Began bailing Opaque, brown |
| 77 | 90 | | - | 23.8 TH | | | Opaque brown |
| 12:20 | 110 | 2180 | 7.42 | 23.8 | | | Stopped bailing to put in submersible |
| 12:25 | 130 | 1950 | 7.28 | 23.0 | | | Translucent Brown |
| 12:31 | 165 | 1900 | 7.23 | 22.8 | | | " " |
| | | | | | | 45.1 | murky Brown wh. = 45.1 |
| INSTRUMENT NO. <u>7901</u> | | <u>7901</u> | | <u>7901</u> | | <u>7901</u> | |
| | | | | | | 9005 | |



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MCK0002809

PLATE

McKesson Corporation Property
Santa Fe Springs, California

F17

DRAWN

JOB NUMBER
17333,168.11

APPROVED
TAK

DATE
1/92

REVISED

DATE

WELL MK-SB-36

DEPTH 64.83

SCREENED INTERVAL 45-65

SLOT SIZE 0.02 inch

GRAVEL PACK Monterey #3

DATE 2-1-91

TIME Surge / bail / pump

DEVELOPMENT METHOD

FIELD SUPERVISION BY Tom Harder

CHECKED BY PS

| TIME SINCE
DEVELOPMENT
STARTED
(minutes) | ESTIMATED
DISCHARGE
(gpm)/ lb/hr | EC
(umhos/cm) | pH | TEMPERATURE
(°C) | SOLIDS
(%) | DEPTH
TO
WATER
(feet) | COMMENTS |
|---|---|------------------|---------|---------------------|---------------|--------------------------------|------------------------|
| 12:36 | 8.5 / 205 | 1990 | 7.25 | 22.4 | | 48.40 | clear |
| 12:41 | 8.5 / 235 | 1950 | 7.23 | 22.9 | | | " |
| 12:46 | 8.5 / 275 | 1990 | 7.21 | 22.3 | | 48.42 | " |
| 12:51 | 8.5 / 330 | 1940 | 7.27 | 22.5 | | | " |
| 12:57 | 8.5 / 385 | 2010 | 7.25 | 22.6 | | 48.42 | " Finished Development |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | Total Purge Vol. = |
| | | | | | | | 385 gals |
| | | | | | | | |
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| INSTRUMENT NO. | | 9005 | SN 7901 | SN 7901 | | | |

MCK0002810



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Santa Fe Springs, California

PLATE

F17a

DRAWN

JOB NUMBER
17333,168.11

APPROVED
TAK

DATE
1/92

REVISÉ

DATE _____

WELL MK-SB-37

DEPTH.

SCREENED INTERVAL

SLOT SIZE 2.03

GRAVEL PACK Monterey #3

DATE 11-7-91

TIME 0739

DEVELOPMENT METHOD Surge i Bail

FIELD SUPERVISION BY Tom Harder

CHECKED BY B Chidambaram 2/8/10

| TIME SINCE DEVELOPMENT STARTED (minutes) | ESTIMATED DISCHARGE (gpm) | EC (umhos/cm) | pH | TEMPERATURE (°C) | SOLIDS (%) | DEPTH TO WATER (feet) | COMMENTS |
|--|---------------------------|---------------|---------|------------------|------------|-----------------------|--|
| 0 | | | | | | | |
| 9:02:38 | | | | | | 30.10 | Began Surging |
| 07:44 | | 1800 | 4.21 | 20.1 | 40% | 31.7 TH | Finished Surging |
| 07:47 | u/gal. | 2140 | 6.40 | 19.2 | 35% | 31.76 | Began Bailing: opaque brown well day: recover .02 ft in 25 seconds |
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| INSTRUMENT NO. 9005 | | 3N 7846 | 3N 7846 | 3N 7846 | | | |

MCK0002811



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Santa Fe Springs, California

PLATE

F18

DRAWN

JOB NUMBER
17333,168.11

APPROVED
TAK

DATE
1/92

REVISED

DATE _____

APPENDIX G
WELL MONITORING/SAMPLING FORMS

MCK0002813

FIELD WATER-LEVEL MEASUREMENTS

000001

3.32

SITE McKesson Santa Fe Spgs.CHECKED BY B. Chadwick
4/4/90PROJECT NO. 17333, 158.11FIELD PERSONNEL Tom Harder

| WELL ID. | DATE | TIME | REFERENCE ELEVATION (feet) | DEPTH TO WATER (feet) | WATER ELEVATION (feet) | INSTRUMENT NO. |
|----------|--------|-------|----------------------------|-----------------------|------------------------|----------------|
| MK-SB-32 | 8-7-90 | 07:47 | | 33.27' | | Tag # 76 |
| MK-MW-02 | " | 07:58 | | 44.77' | | |
| MK-MW-01 | " | 08:11 | | 47.81 | | |
| MK-MW-03 | " | 08:25 | | 48.49 | | |
| MK-SB-10 | " | 08:34 | | 49.05 | | |
| MK-SB-20 | " | 08:45 | | 49.17 | | |
| MK-SB-17 | " | 09:17 | | 48.32 | | |
| MK-SB-13 | " | 09:25 | | 46.32 | | |
| MK-SB-4 | " | 09:40 | | 44.62 | | |
| MK-SB-7 | " | 10:16 | | 46.93 | | |
| MK-SB-23 | " | 10:25 | | 48.32 | | |
| MK-SB-25 | " | 10:34 | | 46.50 | | |
| MK-SB-32 | 8-7-90 | 14:06 | | 33.27' | | Tag # 76 |
| MK-MW-02 | 8-7-90 | 14:13 | | 44.72 | | |
| MK-SB-13 | 8-7-90 | 14:33 | | 46.26 | | |
| MK-MW-01 | " | 14:38 | | 47.73 | | |
| MK-SB-17 | " | 14:44 | | 48.27 | | |
| MK-MW-03 | " | 14:49 | | 48.42 | | |
| MK-SB-10 | " | 14:54 | | 48.97 | | |
| MK-SB-20 | " | 15:00 | | 49.10 | | |
| MK-SB-7 | " | 15:06 | | 46.87 | | |
| MK-SB-23 | " | 15:10 | | 48.26 | | |
| MK-SB-25 | " | 15:13 | | 46.44 | | |
| MK-SB-4 | " | 15:18 | | 44.55 | | |

MCK0002814

Sling Shot Elect Well Sounder from Geotechnical Services (Tag # 76)



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McKesson Corporation Property
Santa Fe Springs, California

PLATE

G1

DRAWN

JOB NUMBER
17333,168.11

APPROVED
THK

DATE
1/92

REVISED

DATE

000000

132

CHECKED BY EL
8/17/90

8/17/90

Solinist

[illegible]

MCK0002815



**McKesson Corporation Property
Santa Fe Springs, California**

PLATE

G2

DRAWN

JOB NUMBER
17333,168.11

APPROVED
THK

DATE
1/92

REVISÉ

DATE _____

FIELD WATER-LEVEL MEASUREMENTS

3.3.2 CC 3000

SITE McKesson Santa Fe Springs

CHECKED BY Elizabeth
8/20/90

PROJECT NO. 17333, 158.11

FIELD PERSONNEL Tom Harder

WL on 8/17/90

[illegible]

33.51
44.93
46.46
47.95
44.78
47.13
48.46
49.23
49.33
48.48
48.50
48.68

MCK0002817



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- steel ~~tape~~ ruler length = 3' **G4**

PLATE

DRAWN

JOB NUMBER
17333,168.11

APPROVED
TAK

DATE
1/92

REVISED

DATE _____

FIELD WATER-LEVEL MEASUREMENTS

000000

SITE McKesson Santa Fe Springs 3.3.2

CHECKED BY

B. ChedwickPROJECT NO. 17333, 158.11

8/28/92

FIELD PERSONNEL Tom Harder

| WELL ID. | DATE | TIME | REFERENCE
ELEVATION
(feet) | DEPTH TO
WATER
(feet) | WATER
ELEVATION
(feet) | INSTRUMENT
NO. |
|----------|---------|-------|----------------------------------|-----------------------------|------------------------------|-------------------|
| MK-SB-32 | 8-27-90 | 08:40 | | 33.51 | | 09468 |
| MK-MW-02 | " | 08:45 | | 44.92 | | (50 inst) |
| MK-MW-01 | " | 08:56 | | 47.93 | | |
| MK-SB-13 | " | 09:07 | | 46.45 | | |
| MK-SB-04 | " | 09:17 | | 44.78 | | |
| MK-SB-07 | " | 09:27 | | 47.12 | | |
| MK-MW-03 | " | 09:34 | | 48.66 | | |
| MK-SB-10 | " | 09:42 | | 49.21 | | |
| MK-SB-20 | " | 09:50 | | 49.32 | | |
| MK-SB-17 | " | 09:59 | | 48.46 | | |
| MK-SB-23 | " | 10:07 | | 48.48 | | |
| MK-SB-25 | " | 10:13 | | 46.66 | | |
| | | | | | | |
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| | | | | | | |
| | | | | | | |
| | | | TOC | Tape reads | Water
Depth | |
| MK-MW-01 | 8-27-90 | 08:58 | 49 | 1.07 | 47.93 | |
| MK-SB-13 | | 09:09 | 47 | 0.54 | 46.46 | |
| MK-SB-04 | | 09:19 | 45 | 0.21 | 44.79 | |
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& Geophysicists

McKesson Corporation Property
Santa Fe Springs, California

PLATE
G5

DRAWN

JOB NUMBER
17333,168.11

APPROVED
TAK

DATE
1/92

REVISED

DATE

FIELD WATER-LEVEL MEASUREMENTS

3.3.2

000483

SITE McKesson Santa Fe Springs

CHECKED BY BC

PROJECT NO. 17333, 158.11

9/21/90

FIELD PERSONNEL Tom Harder

| WELL ID. | DATE | TIME | REFERENCE
ELEVATION
(feet) | DEPTH TO
WATER
(feet) | WATER
ELEVATION
(feet) | INSTRUMENT
NO. |
|----------|---------|-------|----------------------------------|-----------------------------|------------------------------|-------------------|
| MK-SB-32 | 9-21-90 | 10:23 | | 34.24 | | Solinaist |
| MK-MW-02 | " | 10:29 | | 45.15 | | 09468 |
| MK-MW-01 | " | 10:36 | | 48.17 | | |
| MK-SB-13 | " | 10:46 | | 46.69 | | |
| MK-SB-4 | " | 10:55 | | 45.02 | | |
| MK-SB-7 | " | 11:07 | | 47.37 | | |
| MK-MW-03 | " | 11:12 | | 48.92 | | |
| MK-SB-10 | " | 11:18 | | 49.46 | | |
| MK-SB-20 | " | 11:23 | | 49.57 | | |
| MK-SB-17 | " | 11:31 | | 48.72 | | |
| MK-SB-23 | " | 11:37 | | 48.72 | | |
| MK-SB-25 | " | 11:45 | | 46.90 | | |
| PI, MW-2 | " | 11:51 | | 26.85 | | 55 |
| PI, MW-1 | " | 11:53 | | Dry | | |
| PI, MW-3 | " | 11:57 | | Dry | | |
| | | | | | | |
| | | | | | | |
| | | | Top of casing | Tape reads | Water Depth | |
| MK-MW-01 | 9-21-90 | 10:40 | 49.0 | 0.83 | 48.17 | |
| MK-SB-13 | " | 10:49 | 47.0 | 0.31 | 46.69 | |
| MK-SB-4 | " | 10:58 | 46.0 | 0.98 | 45.02 | |
| | | | | | | |
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MCK0002819



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**McKesson Corporation Property
Santa Fe Springs, California**

PLATE

G6

DRAWN

JOB NUMBER
17333,168.11

APPROVED
TAK

DATE
1/92

RE VISED

DATE

000449

CHECKED BY B. Chz Lueck
12/3/91

FIELD PERSONNEL Tom Harder

S. 1.2
-5.01
-8.12
-16.61

MCK0002820



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**McKesson Corporation Property
Santa Fe Springs, California**

PLATE

G7

DRAWN

JOB NUMBER
17333,168.11

APPROVED
TAK

DATE
1/92

RE VISED

DATE _____

FIELD WATER-LEVEL MEASUREMENTS

C00506

SITE McKesson Santa Fe SpringsCHECKED BY BChadwick
10/25/90PROJECT NO. 17333, 158.11FIELD PERSONNEL Tom Harder / Dan Johnson

| WELL ID. | DATE | TIME | REFERENCE ELEVATION (feet) | DEPTH TO WATER (feet) | WATER ELEVATION (feet) | INSTRUMENT NO. |
|-------------------------------|----------|-------|----------------------------|-----------------------|------------------------|------------------------|
| MK-MW-2 | 10-23-90 | 08:33 | | 45.02 | 70.02 | 09468 |
| MK-SB-13 | " | 08:53 | | 46.60 | measured | |
| MK-MW-1 | " | 09:09 | | 48.08 | well sounder | |
| MK-MW-3 | " | 09:21 | | 48.76 | 70.10 | |
| MK-SB-10 | " | 09:30 | | 49.33 | 65.50 | |
| MK-SB-32 | " | 09:41 | | 36.64 | 39.29 | |
| MK-SB-4 | " | 09:51 | | 44.88 | 64.21 | |
| MK-SB-7 | " | 10:01 | | 47.20 | 63.71 | |
| MK-SB-20 | " | 10:12 | | 49.45 | 64.02 | |
| MK-SB-25 | " | 10:22 | | 46.79 | 64.16 | |
| MK-SB-17 | " | 10:35 | | 48.61 | 64.10 | |
| MK-SB-23 | " | 10:46 | | 48.59 | 65.08 | |
| PIMW-2 | " | 10:59 | | 26.825 | 27.26 | 0.44 feet |
| PIMW-4 | " | 11:07 | | — | 40.79 | Previous investigation |
| PIMW-3 | " | 11:11 | | — | 26.95 | Wells |
| PIMW-1 | " | 11:15 | | — | 25.39 | |
| C1 - 10-23-90 - 10:48 - 10:50 | | | Top of casing | Tape Reads | Depth to water | Total Depth |
| MK-MW-2 | 10-23-90 | 08:37 | 46' | 0.98 | 45.02 | 70.26 |
| MK-SB-13 | " | 08:56 | 47' | 0.40 | 46.60 | 62.48 |
| MK-MW-1 | " | 09:12 | 49' | 0.92 | 48.08 | 70.03 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

MCK0002821



Harding Lawson Associates
Engineers, Geologists
& Geophysicists

McKesson Corporation Property
Santa Fe Springs, California

PLATE

G8

DRAWN

JOB NUMBER
17333,168.11

APPROVED
THK

DATE
1/92

REVISED

DATE

FIELD WATER-LEVEL MEASUREMENTS

000000

SITE McKesson Santa Fe SpringsCHECKED BY B. ChardPROJECT NO. 17333, 158.11

11/14/91

FIELD PERSONNEL Tom Harder

| WELL ID. | DATE | TIME | REFERENCE ELEVATION (feet) | DEPTH TO WATER (feet) | WATER ELEVATION (feet) | INSTRUMENT NO. |
|----------|----------|-------|----------------------------|-----------------------|------------------------|----------------|
| MK-MW-2 | 11-16-90 | 10:29 | | 44.99 | | 09468 |
| MK-MW-1 | " | 10:41 | | 48.04 | | |
| MK-SB-13 | " | 10:52 | | 46.55 | | |
| MK-MW-3 | " | 11:04 | | 48.70 | | |
| MK-SB-10 | " | 11:11 | | 49.27 | | |
| MK-SB-32 | " | 11:19 | | 37.26 | | |
| MK-SB-4 | " | 11:27 | | 44.84 | | |
| MK-SB-7 | " | 11:34 | | 47.14 | | |
| MK-SB-20 | " | 11:43 | | 49.39 | | |
| MK-SB-25 | " | 11:49 | | 46.74 | | |
| MK-SB-17 | " | 12:05 | | 48.57 | | |
| MK-SB-23 | " | 12:11 | | 48.54 | | ↓ |
| PIMW-2 | " | 12:14 | | 26.86 | | |
| PIMW-7 | " | 12:16 | | Dry | | |
| PIMW-3 | " | 12:17 | | Dry | | |
| | | | Top of Casing | Tape Reads | Depth to Water | |
| MK-MW-2 | 11-16-90 | 10:32 | 46' | 1.01' | 44.99 | |
| MK-MW-1 | " | 10:44 | 49' | 0.97' | 48.03 | |
| MK-SB-13 | " | 10:55 | 47' | 0.46 | 46.54 | |
| | | | | | | |
| | | | | | | |
| PIMW-1 | 11-16-90 | 12:19 | | Dry | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

MCK0002822



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& Geophysicists

McKesson Corporation Property
Santa Fe Springs, California

PLATE
G9

DRAWN

JOB NUMBER
17333,168.11

APPROVED
THK

DATE
1/92

REVISED

DATE

4/23/91

FIELD PERSONNEL Tom Harder

[illegible]

MCK0002823



PLATE

G10

FIELD WATER-LEVEL MEASUREMENTS

SITE McKesson, Santa Fe SpringsCHECKED BY B. L. LunkPROJECT NO. 17333, 168.111/31/91FIELD PERSONNEL Tom Harder

| WELL ID. | DATE | TIME | REFERENCE ELEVATION (feet) | DEPTH TO WATER (feet) | WATER ELEVATION (feet) | INSTRUMENT NO. |
|----------|---------|-------|-------------------------------|-----------------------|------------------------|--------------------|
| MR-SB-32 | 1-30-91 | 13:10 | | 33.49 | | 09468 |
| MR-MW-02 | " | 13:16 | | 44.99 | | |
| MR-MW-01 | " | 13:31 | | 48.05 | | |
| MR-SB-13 | " | 13:42 | | 46.56 | | |
| MR-SB-4 | " | 13:52 | | 44.83 | | |
| MR-SB-7 | " | 13:58 | | 47.15 | | |
| MR-MW-03 | " | 14:06 | | 48.71 | | |
| MR-SB-10 | " | 14:14 | | 49.30 | | |
| MR-SB-20 | " | 14:22 | | 49.43 | | |
| MR-SB-17 | " | 14:29 | | 48.61 | | |
| MR-SB-23 | " | 14:37 | | 48.57 | | |
| MR-SB-25 | " | 14:43 | | 46.74 | | |
| P1MW-2 | " | 15:03 | | 26.84 | | |
| P1MW-4 | " | 15:06 | | 39.78 | | |
| P1MW-3 | " | 15:10 | | 26.37 | | |
| P1MW-1 | " | 15:14 | | dry | | |
| MR-SB-36 | " | 15:21 | Not Surveyed
Not developed | 46.84 | | |
| MR-SB-37 | " | 15:25 | TD=31.4 | 28.19 | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| MR-MW-02 | 1-30-91 | 13:19 | 46 | 1.02 | 44.98 | Manual Well Sample |
| MR-MW-01 | " | 13:33 | 49 | 0.96 | 48.04 | |
| MR-SB-13 | " | 13:44 | 47 | 0.44 | 46.56 | ✓ |

of Solin
44.99
48.05
46.56



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& Geophysicists

McKesson Corporation Property
Santa Fe Springs, California

MCK0002824

LATE

G11

Drawn

JOB NUMBER
17333,168.11

APPROVED
AK

DATE
1/92

REVISED

DATE

FIELD WATER-LEVEL MEASUREMENTS

SITE McKesson Santa Fe SpringsCHECKED BY B. ChaluckPROJECT NO. 17333, 116.11

2/13/91

FIELD PERSONNEL Tom Harder / Don JohnsonPRE GW SAMPLINGTotal Depth

| WELL ID. | DATE | TIME | REFERENCE ELEVATION (feet) | DEPTH TO WATER (feet) | WATER TH ELEVATION (feet) | INSTRUMENT NO. |
|-----------|---------|------|----------------------------|-----------------------|---------------------------|----------------------|
| NK-MW-2 | 2-11-91 | 0744 | | 44.96 | 70.24 | 09468 |
| NK-MW-3 | " | 0750 | | 48.67 | 70.09 | |
| NK-MW-1 | " | 0759 | | 48.02 | 70.05 | |
| NK-SB-13 | " | 0808 | | 46.53 | 62.47 | |
| NK-SB-7 | " | 0823 | | 44.8-47.0 | 63.70 | |
| NK-SB-4 | " | 0818 | | 44.81 | 61.21 | |
| NK-SB-10 | " | 0830 | | 49.26 | 65.50 | |
| NK-SB-32 | " | 0838 | | 33.89 | 39.29 | |
| NK-SB-20 | " | 0845 | | 49.40 | 64.01 | |
| NK-SB-25 | " | 0854 | | 46.73 | 64.15 | |
| NK-SB-17 | " | 0901 | | 48.57 | 64.09 | |
| NK-SB-23 | " | 0908 | | 48.59 | 65.09 | |
| NK-SB-17A | " | 0918 | | 49.85 | 4 TH 116.19 | |
| NK-SB-17B | " | 0921 | | 49.76 | 90.01 | |
| NK-SB-27A | " | 0923 | | 48.12 | 127.81 | |
| NK-SB-23B | " | 0925 | | 47.99 | 95.26 | |
| NK-SB-36 | " | 0929 | | 45.84 | 65.08 | |
| NK-SB-37 | " | 0913 | | 31.72 | 32.09 | |
| FINW-2 | " | 0933 | | 26.86 | | |
| FINW-4 | " | 0936 | | 40.48 | | |
| FINW-3 | " | 0938 | | dry | | |
| FINW-1 | " | 0940 | | dry | | |
| NK-MW-03 | 2-11-91 | 0753 | 49 / 0.35 | 48.65 | | Manual Well Sounding |
| NK-MW-01 | " | 0803 | 49 / 1.00 | 48.00 | | " |
| NK-SB-13 | " | 0810 | 47 / 0.48 | 46.52 | | " |



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Santa Fe Springs, California

MCK0002825

PLATE

G12

DRAWN

JOB NUMBER
17333,168.11

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THK

DATE
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DATE

ATTACHMENT A - PROCEDURE A4

FIELD WATER-LEVEL MEASUREMENTS

SITE McKesson Santa Fe SpringsCHECKED BY R. Chadwick
9/11/91PROJECT NO. 17333, 165.11FIELD PERSONNEL Tom Harder

| WELL ID. | DATE | TIME | REFERENCE ELEVATION (feet) | DEPTH TO WATER (feet) | WATER ELEVATION (feet) | INSTRUMENT NO. |
|-----------|---------|-------|----------------------------|-----------------------|------------------------|---------------------|
| AK-MW-2 | 4-11-91 | 08:20 | | 43.73 | 47.92 | 09468 |
| AK-MW-3 | " | 08:32 | | 47.35 | 47.95 | |
| AK-SB-17A | " | 08:41 | | 48.08 | 47.06 | |
| AK-SB-17B | " | 08:48 | | 48.04 | | |
| AK-SB-23A | " | 08:53 | | 46.22 | | |
| AK-SB-23B | " | 08:55 | | 46.31 | | |
| AK-MW-1 | " | 08:58 | | 46.92 | | |
| AK-SB-13 | " | 09:04 | | 45.39 | | |
| AK-SB-4 | " | 09:07 | | 43.51 | | |
| AK-SB-36 | " | 09:11 | | 44.51 | | |
| AK-SB-7 | " | 09:15 | | 45.77 | | |
| AK-SB-10 | " | 09:18 | | 48.02 | | |
| AK-SB-32 | " | 09:23 | | 31.42 | | |
| AK-SB-20 | " | 09:27 | | 48.19 | | |
| AK-SB-17 | " | 09:31 | | 47.42 | | |
| AK-SB-25 | " | 09:34 | | 45.50 | | |
| AK-SB-23 | " | 09:39 | | 47.30 | | |
| AK-SB-37 | " | 09:42 | | dry | | |
| PIMW-2 | " | 09:45 | | 26.86 | | |
| PIMW-4 | " | 09:47 | | 40.38 | | |
| PIMW-1 | " | 09:50 | | dry | | |
| PIMW-3 | " | 09:51 | | 26.65 | | |
| AK-MW-2 | 4-11-91 | 08:23 | 74.28 | 43.72 | | manual well sounder |
| AK-MW-3 | " | 08:33 | 78.067 | 47.33 | | |
| AK-SB-17A | " | 08:43 | 49.094 | 48.06 | | |

MCK0002826

Slant boring

Note: Major storm event occurred in Southern California since last monitoring data collection on Feb. 11, 1991



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& Geophysicists

McKesson Corporation Property
Santa Fe Springs, California

PLATE

G13

DRAWN

JOB NUMBER
17333,168.11

APPROVED
THK

DATE
1/92

REVISED

DATE



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name McKesson SFS
Job Number 17353, 158.11
Recorded by Tom Harder (Signature)

Well No. MK-MW-01
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date 8-1-90 Time 13:31
Sampled by TH (Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC): 69.98
Water Level Depth (WL in feet BTOC): 47.56
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type: _____
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____
☐ Other - Type: _____

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC) from _____ to _____

PURGE VOLUME CALCULATION:

$$\left(\frac{69.98 - 47.56}{1} \right) \times \frac{4^2}{4} \times 0.0408 = 58.5 \text{ gallons}$$

TD (feet) WL (feet) D (inches) # Vols Calculated Purge Volume

PURGE TIME

13:31 Start 1347 Stop _____ Elapsed _____

PURGE RATE

Initial 4.5 gpm Final _____ gpm

ACTUAL PURGE VOLUME

~ 70 gallons

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|-----------------------------|------|------------------|---|---------|
| 0 | 6.95 | 860 | 26.0 | 4.5 gpm |
| 3 | 6.94 | 880 | 24.5 | " |
| 6 | 6.99 | 780 | 24.6 | " |
| 9 | 6.99 | 860 | 24.3 | " |
| 13 | 7.00 | 860 | 24.4 | " |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|-----------------------------|------|------------------|---|-------|
| 16 | 7.00 | 860 | 24.4 | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Meter Nos. | | | | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): Clear, no odor

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: 1" x 3' stainless steel
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Same As Above

☐ Grab - Type: _____

☐ Other - Type: _____

SAMPLING DISTRIBUTION

Sample Series: _____

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|-----------------|--------------|--------------------|--------------------------------|-----|----------------|
| MK-MW-01-080990 | 2 x 40 ml | 624 | HCL | ATI | |
| " | 2 x 1 pint | Inorganics | None | | Field Filtered |
| " | 2 x 1 liter | 625 | None | | |
| " | 1 x 402 | NO ₃ | H ₂ SO ₄ | | |
| " | 1 liter | 418.1 | H ₂ SO ₄ | | |
| MK-MW-01-080990 | 1 pint | Metals | HNO ₃ | ✓ | Field Filtered |

QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| | |
| | |
| | |

Blank Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |

Other Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |

MCK0002827



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name McKesson S Fe S

Job Number 17333, 15K.11

Recorded by Tom Harder/Dan Johnson

Well No. MK-MW-02

Well Type: ☒ Monitor ☐ Extraction ☐ Other

Well Material: ☒ PVC ☐ St. Steel ☐ Other

Date 8-1-90 Time 13:08 TH

Sampled by TH/DJ

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):

☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other

Total Depth of Casing (TD in feet BTOC): 70.33

Water Level Depth (WL in feet BTOC): 44.52

Number of Well Volumes to be purged (# Vols)

☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type: _____

☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Other - Type: _____

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other

Depth in feet (BTOC): _____ Screen Interval in Feet (ETOC) from _____ to _____

PURGE VOLUME CALCULATION:

$$\left(\underset{\text{TD (feet)}}{70.33} - \underset{\text{WL (feet)}}{44.52} \right) \times \underset{\text{D (inches)}}{4}^2 \times \underset{\text{\# Vols}}{4} \times 0.0408 = \underset{\text{Calculated Purge Volume}}{67.4} \text{ gallons}$$

PURGE TIME

15:08 TH Start 15:25 Stop 17 min Elapsed

PURGE RATE

Initial 4.5 gpm Final 4.5 gpm 76.5 gallons

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|-----------------------------|------|------------------|---|------------------|
| 1 | 7.15 | 1200 | 26.2 | very silty |
| 3 | 7.06 | 1250 | 24.3 | moderately silty |
| 5 | 7.01 | 1350 | 24.4 | slightly silty |
| 7 | 7.09 | 1400 | 24.4 | 4.5 gal/min |
| 9 | 7.12 | 1350 | 24.3 | " |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|-----------------------------|------|------------------|---|----------------|
| 11 | 7.10 | 1100 | 24.4 | slightly murky |
| 13 | 7.10 | 1350 | 24.4 | 4.5 gal/min |
| 15 | 7.10 | 1350 | 24.4 | clear |
| 17 | 7.10 | 1300 | 24.4 | " |

Observations During Purging (Well Condition, Turbidity, Color, Odor): clear, no odor

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: 1' x 3' stainless steel

☐ Same As Above

☐ Grab - Type: _____

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Other - Type: _____

SAMPLING DISTRIBUTION

Sample Series: _____

| Sample No. | Volume Cont. | Analysis Requested | Preservatives | Lab | Comments |
|-----------------|--------------|--------------------|--------------------------------|-----|----------------|
| MK-MW-02-080190 | 2 x 40ml | 624 | HCL | ATI | |
| " | 1 pint | Inorganics | None | | Field Filtered |
| " | 1 pint | Metals | HNO ₃ | | Field Filtered |
| " | 2 x 1 liter | 625 | None | | |
| " | 4 oz | NO ₃ | H ₂ SO ₄ | | |
| " | 1 liter | 418.1 | H ₂ SO ₄ | | |

QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|-------------------------------|----------------------|
| MK-MW-02-080190 TH | |
| MK-MW-02-080190 | MK-MW-02-080190 |

Blank Samples

| Type | Sample No. |
|--------|-------------------|
| Equip | MK-MW-02-080190 E |
| Travel | MK-MW-02-080190 B |

Other Samples

| Type | Sample No. |
|------|------------|
| | MCK0002828 |



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name Harding Lawson SFS
Job Number 17333.158.11
Recorded by Tom Heider (Signature)

Well No. MK-MW-03
Well Type: ☒ Monitor ☐ Extraction ☐ Other _____
Well Material: ☒ PVC ☐ St. Steel ☐ Other _____
Date 8-2-90 Time 6:45
Sampled by Don Johnson (Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other _____
Total Depth of Casing (TD in feet BTOC): 69.93
Water Level Depth (WL in feet BTOC): 48.42
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other _____

PURGE METHOD

☐ Bailer - Type: _____
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____
☐ Other - Type: _____

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other _____
Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC)
from _____ to _____

PURGE VOLUME CALCULATION:

$(69.93 - 48.42) \times 4^2 \times 4 \times 0.0408 = 56.2$ gallons
TD (feet) WL (feet) D (inches) # Vols Calculated Purge Volume

PURGE TIME

PURGE RATE

ACTUAL PURGE VOLUME

6:58 Start 7:18 Stop 20 min Elapsed Initial 4.5 gpm Final 4.5 gpm ~64 gal gallons

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|-----------------------------|------|------------------|---|---------------------|
| 1 | 7.07 | 1300 | 22.3 | slightly murky |
| 2 | 7.07 | 1400 | 22.2 | slightly murky, ben |
| 4 | 7.09 | 1450 | 22.2 | slightly murky |
| 6 | 7.11 | 1450 | 22.2 | " |
| 8 | 7.09 | 1500 | 22.2 | " |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|-----------------------------|--------------------------------|------------------|---|-------------|
| 10 | 7.09 | 1400 | 22.2 | clearing up |
| 12 | 7.11 | 1450 | 22.3 | 3 gal/min |
| 14 | 7.11 | 1400 | 22.2 | 3 gal/min |
| 20 | 7.10 | 1400 | 22.1 | 4.5 gal/min |
| Meter Nos. | pH/time 5/27846 cond 3/2481202 | | | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): No odor, well in good condition, clear and of purging!
Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: 1" x 3' Stainless Steel ☐ Same As Above
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____ ☐ Grab - Type: _____
☐ Other - Type: _____

SAMPLING DISTRIBUTION

Sample Series: _____

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|-----------------|--------------|--------------------|--------------------------------|-----|----------------|
| MK-MW-03-080290 | 2 x 40ml | 624 | HCL | ATI | |
| " | 1 pint | Inorganics | None | | Field Filtered |
| " | 1 pint | Metals | HNO ₃ | | Field Filtered |
| " | 2 x 1 liter | 625 | None | | |
| " | 1 liter | 418.1 | H ₂ SO ₄ | | |
| " | 4 oz | NO ₃ | H ₂ SO ₄ | | |

QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| | |
| | |
| | |

Blank Samples

| Type | Sample No. |
|-----------|------------------|
| Equip. TH | MK-08-13-080280E |
| Travel TH | MK-08-13-080290B |
| | TH |

Other Samples

| Type | Sample No. |
|------|------------|
| | MCK0002829 |



Harding Lawson Associates
Engineering and
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003732 3.3.5

GROUND-WATER SAMPLING FORM

Job Name McKesson Santa Fe Spgs

Job Number 17333, 158.11

Recorded by Tom Harder
(Signature)

Well No. MK-SB-4

Well Type: ☒ Monitor ☐ Extraction ☐ Other

Well Material: ☒ PVC ☐ St. Steel ☐ Other

Date 8-3-96 Time 0752

Sampled by TH/DJ
(Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):

☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other

Total Depth of Casing (TD in feet BTOC): 64.04

Water Level Depth (WL in feet BTOC): 44.57

Number of Well Volumes to be purged (# Vols)

☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE VOLUME CALCULATION:

$$\left(\frac{64.04 - 44.57}{\text{TD (feet)}} \right) \times \frac{4}{\text{WL (feet)}} \times \frac{4}{\text{D (inches)}} \times \frac{1}{\text{\# Vols}} \times 0.0408 = \frac{50.8}{\text{Calculated Purge Volume}} \text{ gallons}$$

PURGE METHOD

☐ Bailer - Type:

☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:

☐ Other - Type:

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other

Depth in feet (BTOC): Screen Interval in Feet (BTOC)
from to

PURGE TIME

0752 Start 0805 Stop 13 Elapsed

PURGE RATE

Initial 4.5 gpm Final 4.5 gpm ~55 gallons

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (umhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|-----------------------------|------|------------------|---|----------------|
| 2 | 6.99 | 1000 | 22.3 | 4.5 gpm |
| 4 | 6.95 | 840 | 22.6 | |
| 6 | 6.99 | 910 | 22.6 | Murky |
| 8 | 7.02 | 858 | 22.7 | " |
| 11 | 7.02 | 860 | 22.7 | slightly murky |

| Minutes Since Pumping Began | pH | Cond. (umhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|--|------|------------------|---|-------|
| 13 | 7.04 | 930 | 22.5 | clear |
| Meter Nos. <u>1/2" 1846</u> <u>092088</u> <u>1/2" 1846</u> | | | | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): clear, no odor

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: 1" x 3' Stainless steel

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:

☐ Same As Above

☐ Grab - Type:

☐ Other - Type:

SAMPLING DISTRIBUTION

Sample Series:

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|-----------------|--------------|--------------------|--------------------------------|-----|----------------|
| MK-SB-04-080390 | 2 x 40ml | 624 | HCL | ATI | |
| " | 1 pint | Inorganics | None | | Field Filtered |
| " | 1 pint | Metals | HNO ₃ | | Field Filtered |
| " | 2 x 1 liter | 624 | None | | |
| " | 1 liter | 418.1 | H ₂ SO ₄ | | |
| " | 4 oz | NO ₃ | H ₂ SO ₄ | | |

QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| | |
| | |
| | |

Blank Samples

| Type | Sample No. |
|--------|-----------------|
| Travel | MK-SB-4-080390B |
| | |
| | |

Other Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |

MCK0002830



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name McKesson S Fe S
Job Number 17333, 158.11
Recorded by [Signature]

Well No. MK-SB-7
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date 8-3-90 Time 9:16
Sampled by TH/DJ (Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC): 63.53
Water Level Depth (WL in feet BTOC): 46.90
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type: _____
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____
☐ Other - Type: _____

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC) from _____ to _____

PURGE VOLUME CALCULATION:

$(63.53 - 46.90) \times 4^2 \times 4 \times 0.0408 = 43.4$ gallons
TD (feet) WL (feet) D (inches) # Vols Calculated Purge Volume

PURGE TIME

9.19 Start 9:31 Stop 12:11 Elapsed

PURGE RATE

Initial 4.5 gpm Final 4.8 gpm ≈ 49 gallons

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (umhos/cm) | T °C / °F | Other |
|-----------------------------|------|------------------|-----------|----------------|
| 1 | 7.15 | 1400 | 22.3 | slightly murky |
| 3 | 7.08 | 1450 | 22.2 | " |
| 5 | 7.01 | 950 | 22.2 | " |
| 7 | 7.09 | 1400 | 22.3 | clearing up |
| 10 | 7.09 | 1400 | 22.3 | clear |

| Minutes Since Pumping Began | pH | Cond. (umhos/cm) | T °C / °F | Other |
|--|------|------------------|-----------|------------|
| 12 | 7.09 | 1400 | 22.3 | very clear |
| Meter Nos. <u>36</u> <u>36</u> <u>36</u> | | | | |
| <u>7846</u> <u>092088</u> <u>7846</u> | | | | |

Observations During Purging (Well Condition, Turbidity, Color, Odor):

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: 1" x 3' Stainless Steel
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Same As Above

☐ Grab - Type: _____

☐ Other - Type: _____

SAMPLING DISTRIBUTION

Sample Series: _____

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|----------------|--------------|--------------------|--------------------------------|-----|----------------|
| MK-SB-7-080390 | 2 x 40ml | 624 | HCL | ATI | |
| | 1 liter | Inorganics | None | | Field filtered |
| | 1 pint | Metals | HNO ₃ | | Field filtered |
| | 2 x 1 liter | 625 | None | | |
| | 1 liter | 418.1 | H ₂ SO ₄ | | |
| | 4oz | 4oz | H ₂ SO ₄ | | |

QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| | |
| | |
| | |
| | |

Blank Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

Other Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

MCK0002831

**Harding Lawson Associates**Engineering and
Environmental Services**GROUND-WATER SAMPLING FORM**Well No. mk-SB-10Well Type: ☒ Monitor ☐ Extraction ☐ OtherWell Material: ☒ PVC ☐ St. Steel ☐ OtherDate 8-02-90 Time 8:25Sampled by DJ/TH
(Initials)Job Name Mckesson-Santa Fe SpringsJob Number 17333, 158-11Recorded by Don Johnson/Tom Hardin
(Signature)**WELL PURGING****PURGE VOLUME**

Casing Diameter (D in inches):

☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ OtherTotal Depth of Casing (TD in feet BTOC): 65.47Water Level Depth (WL in feet BTOC): 48.84

Number of Well Volumes to be purged (# Vols)

☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other**PURGE METHOD**☐ Bailor - Type:☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:☐ Other - Type:**PUMP INTAKE SETTING**☒ Near Bottom ☐ Near Top ☐ OtherDepth in feet (BTOC): _____ Screen Interval in Feet (BTOC)
from _____ to _____**PURGE VOLUME CALCULATION:**

$$\left(\frac{65.47 - 48.84}{16.63} \right) \times \frac{4^2}{16.63} \times 4 \times 0.0408 = 43.42 \text{ gallons}$$

TD (feet) WL (feet) D (inches) # Vols Calculated Purge Volume

PURGE TIME**PURGE RATE****ACTUAL PURGE VOLUME**8:35 Start 8:47 Stop 12:00 ElapsedInitial 48 gpm Final 48 gpm 52 gal gallons**FIELD PARAMETER MEASUREMENT**

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|-----------------------------|------|------------------|---|------------------|
| 1 | 7.15 | 1450 | 22.1 | Very murky |
| 2 | 7.13 | 1450 | 22.0 | moderately murky |
| 4 | 7.15 | 1350 | 22.3 | " |
| 6 | 7.13 | 1050 | 22.1 | Slightly murky |
| 8 | 7.13 | 1350 | 22.3 | " |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|-----------------------------|------|------------------|---|---------------|
| 10 | 7.14 | 1350 | 22.2 | " |
| 12 | 7.13 | 1350 | 22.2 | Finally clear |
| — | — | — | — | " |
| — | — | — | — | " |

Meter Nos. 9/1 temp 9/2 7846 5/20 48202Observations During Purging (Well Condition, Turbidity, Color, Odor): well in good condition, steady flow, no odorDischarge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☐ Other55 gallon drum**WELL SAMPLING****SAMPLING METHOD**☐ Same As Above☒ Bailor - Type: 1" x 3' stainless steel☐ Grab - Type:☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:☐ Other - Type:**SAMPLING DISTRIBUTION**

Sample Series:

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|----------------|--------------|--------------------|---------------|-----|-----------------|
| mk-SB-10-CS-01 | 2 x 40ml | 624 | HCL | ATI | Field F. Filter |
| " | 1 pt | Inorganics | None | | Field F. Filter |
| " | 1 pt | metals | HNO3 | | |
| " | 2 x 1L | 625 | None | | |
| " | 1L | 4181 | H2SO4 | | |
| " | 402 | NO3 | H2SO4 | | |

QUALITY CONTROL SAMPLES

Duplicate Samples

Blank Samples

Other Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| | |
| | |
| | |
| | |

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

MCK0002832



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name McKesson S Fe S
Job Number 17333, 158.11
Recorded by Tom Harder
(Signature)

Well No. MK-SB-13
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date 8-2-90 Time 13:46
Sampled by TH
(Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC): 62.31
Water Level Depth (WL in feet BTOC): 46.21
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type: _____
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____
☐ Other - Type: _____

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC) from _____ to _____

PURGE VOLUME CALCULATION:

$(62.31 - 46.21) \times 4^2 \times 4 \times 0.0408 = 42$ gallons
TD (feet) WL (feet) D (inches) # Vols Calculated Purge Volume

PURGE TIME

13:46 Start 14:01 Stop 15 Elapsed

PURGE RATE

Initial 4.8 gpm Final 4.8 gpm ~55 gallons

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (umhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|-----------------------------|------|------------------|---|---------|
| 2 | 7.02 | 960 | 25.4 | |
| 3 | 7.01 | 980 | 24.4 | 4.8 gpm |
| 5 | 7.01 | 860 | 24.2 | " |
| 8 | 6.98 | 870 | 24.4 | " |
| 11 | 7.07 | 850 | 24.4 | |

| Minutes Since Pumping Began | pH | Cond. (umhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|--|------|------------------|---|-------|
| 15 | 7.08 | 900 | 24.6 | |
| Meter Nos. <u>S/N 7846</u> <u>092088</u> <u>S/N 7846</u> | | | | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): Murky, no odor

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: 1" x 3' Stainless Steel ☐ Same As Above
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____ ☐ Grab - Type: _____
☐ Other - Type: _____

SAMPLING DISTRIBUTION

Sample Series: _____

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|-----------------|--------------|--------------------|--------------------------------|-----|----------------|
| MK-SB-13-080290 | 2x40ml | 624 | HCL | ATI | |
| " | 1 pint | Inorganics | None | | Field Filtered |
| " | 1 pint | Metals | HNO ₃ | | Field Filtered |
| " | 2x1 liter | 625 | None | | |
| " | 1 liter | 418.1 | H ₂ SO ₄ | | |
| " | 4oz | NO ₃ | H ₂ SO ₄ | | |

QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| | |
| | |
| | |

Blank Samples

| Type | Sample No. |
|--------|-------------------|
| Equip | MK-SB-13-080290 E |
| Travel | MK-SB-13-080290 B |
| | |
| | |

Other Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |

MCK0002833

**Harding Lawson Associates**Engineering and
Environmental Services**GROUND-WATER SAMPLING FORM**Job Name McKesson S Fe SJob Number 17333, 158.11Recorded by Tom Harder
(Signature)Well No AK-SB-17Well Type: ☒ Monitor ☐ Extraction ☐ OtherWell Material: ☒ PVC ☐ St. Steel ☐ OtherDate 8-2-90 Time 11:20Sampled by TH/DJS
(Initials)**WELL PURGING****PURGE VOLUME**

Casing Diameter (D in inches):

☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ OtherTotal Depth of Casing (TD in feet BTOC): 64.1Water Level Depth (WL in feet BTOC): 48.9

Number of Well Volumes to be purged (# Vols)

☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other**PURGE METHOD**☐ Bailer - Type: _____☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____☐ Other - Type: _____**PUMP INTAKE SETTING**☒ Near Bottom ☐ Near Top ☐ Other

Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC) from _____ to _____

PURGE VOLUME CALCULATION:

$$\left(\frac{64.10 - 48.9}{1} \right) \times \frac{4^2}{4} \times 0.0408 = 39.7 \text{ gallons}$$

TD (feet) WL (feet) D (inches) # Vols Calculated Purge Volume

PURGE TIME11:23 Start 11:35 Stop 12 mi Elapsed**PURGE RATE**Initial 4.5 gpm Final 4.5 gpm = 55 gal gallons**ACTUAL PURGE VOLUME****FIELD PARAMETER MEASUREMENT**

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|-----------------------------|------|------------------|---|-------------------------|
| 1 | 7.02 | 1300 | 24.7 | Fairly clear = 4.55 g/L |
| 3 | 6.92 | 1400 | 23.3 | " |
| 5 | 6.81 | 1400 | 23.3 | " |
| 7 | 6.81 | 1400 | 23.4 | Clear = 4.55 g/L |
| 10 | 6.84 | 1400 | 23.4 | Clear |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|---|------|------------------|---|------------------|
| 12 | 6.84 | 1400 | 23.4 | Clear = 4.55 g/L |
| Meter Nos. <u>Temp 7846</u> <u>Cond 0481203</u> | | | | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): Well is in good condition, constant flow, no odorDischarge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum**WELL SAMPLING****SAMPLING METHOD**☒ Bailer - Type: 1" x 3' Stainless Steel☐ Same As Above☐ Grab - Type: _____☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____☐ Other - Type: _____**SAMPLING DISTRIBUTION**

Sample Series: _____

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|-------------------------------------|-----------------------|-----------------------|------------------------------------|------------|-----------------------|
| <u>11:30</u> <u>AK-SB-17-080290</u> | <u>2 x 40ml</u> | <u>624</u> | <u>HCL</u> | <u>ATT</u> | |
| " | <u>1 pint</u> | <u>Inorganics</u> | <u>None</u> | | <u>Field Filtered</u> |
| " | <u>1 pint</u> | <u>Metals</u> | <u>HNO₃</u> | | <u>Field Filtered</u> |
| " | <u>2 x 1 liter</u> | <u>625</u> | <u>None</u> | | |
| " | <u>1 liter</u> | <u>418.1</u> | <u>H₂SO₄</u> | | |
| " | <u>NO₃</u> | <u>NO₃</u> | <u>H₂SO₄</u> | | |

QUALITY CONTROL SAMPLES**Duplicate Samples**

| Original Sample No. | Duplicate Sample No. |
|------------------------|------------------------|
| <u>AK-SB-17-080290</u> | <u>AK-SB-17-080290</u> |
| | |
| | |
| | |

Blank Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |

Other Samples

| |
|-------------------|
| MCK0002834 |
| |
| |
| |

**Harding Lawson Associates**Engineering and
Environmental Services**GROUND-WATER SAMPLING FORM**Job Name McKesson S. Fe S.Job Number 17333, 158.11Recorded by Tom Harder
(Signature)Well No. MK-SB-20Well Type: ☒ Monitor ☐ Extraction ☐ OtherWell Material: ☒ PVC ☐ St. Steel ☐ OtherDate 8-2-90 Time 10:05Sampled by TH / DS
(Initials)**WELL PURGING****PURGE VOLUME**

Casing Diameter (D in inches):

☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ OtherTotal Depth of Casing (TD in feet BTOC): 64.01Water Level Depth (WL in feet BTOC): 48.95

Number of Well Volumes to be purged (# Vols)

☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other**PURGE METHOD**☐ Bailer - Type: _____☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____☐ Other - Type: _____**PUMP INTAKE SETTING**☒ Near Bottom ☐ Near Top ☐ OtherDepth in feet (BTOC): _____ Screen Interval in Feet (BTOC)
from _____ to _____**PURGE VOLUME CALCULATION:**

$$\left(\frac{64.01 - 48.95}{\text{TD (feet)}} \right) \times \frac{4^2}{\text{D (inches)}} \times \frac{4}{\text{= Vols}} \times 0.0408 = \underline{39.32} \text{ gallons}$$

Calculated Purge Volume

PURGE TIME1005 Start 1016 Stop _____ Elapsed _____ Initial _____ gpm Final _____ gpm 45 gallons**PURGE RATE****ACTUAL PURGE VOLUME****FIELD PARAMETER MEASUREMENT**

| Minutes Since Pumping Began | pH | Cond. (umhos/cm) | T <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F | Other |
|-----------------------------|------|------------------|--|---------|
| 1 | 6.96 | 930 | 24.2 | 4.5 gpm |
| 5 | 6.95 | 920 | 23.3 | |
| 7 | 6.96 | 860 | 23.3 | |
| 9 | 6.94 | 880 | 23.5 | |
| 11 | 6.96 | 900 | 23.5 | |

| Minutes Since Pumping Began | pH | Cond. (umhos/cm) | T <input type="checkbox"/> °C <input type="checkbox"/> °F | Other |
|-----------------------------|----|------------------|---|-------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Meter Nos. SN 4246 092088 SN 7846

Observations During Purging (Well Condition, Turbidity, Color, Odor):

Slightly murky, slight odorDischarge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other55 gallon drum**WELL SAMPLING****SAMPLING METHOD**☒ Bailer - Type: 1" x 3' Stainless Steel☐ Same As Above☐ Grab - Type: _____☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____☐ Other - Type: _____**SAMPLING DISTRIBUTION**

Sample Series: _____

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|------------------------|--------------------|--------------------|---------------|------------|-----------------------|
| <u>MK-SB-20-C86240</u> | <u>2 x 40ml</u> | <u>624</u> | <u>HCL</u> | <u>ATF</u> | |
| " | <u>1 pint</u> | <u>inorganics</u> | <u>None</u> | | <u>Field filtered</u> |
| " | <u>1 pint</u> | <u>metals</u> | <u>HNO3</u> | | <u>Field Filtered</u> |
| " | <u>3 x 1 liter</u> | <u>625</u> | <u>None</u> | | |
| " | <u>1 liter</u> | <u>418.1</u> | <u>H2SO4</u> | | |
| " | <u>4 oz</u> | <u>NO3</u> | <u>H2SO4</u> | | |

QUALITY CONTROL SAMPLES**Duplicate Samples**

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| | |
| | |
| | |
| | |

Blank Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

Other Samples

| Ty | Sample No. |
|----|------------|
| | |
| | |
| | |
| | |

MCK0002835



Harding Lawson Associates

Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name McKesson S Fe S
Job Number 17333, 158.11
Recorded by Tom Harder
(Signature)

Well No. MK-3B-23
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date 8-3-90 Time 10:41
Sampled by TH/DJ
(Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):

☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other

Total Depth of Casing (TD in feet BTOC): 65.09

Water Level Depth (WL in feet BTOC): 48.29

Number of Well Volumes to be purged (# Vols)

☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type:

☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:

☐ Other - Type:

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other

Depth in feet (BTOC): Screen Interval in Feet (BTOC)
from to

PURGE VOLUME CALCULATION:

$$\left(\frac{65.09}{\text{TD (feet)}} - \frac{48.29}{\text{WL (feet)}} \right) \times \frac{4^2}{\text{D (inches)}} \times \frac{4}{\text{\# Vols}} \times 0.0408 = \frac{43.9}{\text{Calculated Purge Volume}} \text{ gallons}$$

PURGE TIME

10:41 Start 10:55 Stop 14 Elapsed

PURGE RATE

Initial 4.5 gpm Final 4.5 gpm ~50 gallons

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F | Other |
|-----------------------------|------|------------------|--|-------|
| 1 | 7.02 | 1000 | 24.9 | murky |
| 4 | 7.04 | 990 | 23.7 | " |
| 6 | 7.04 | 970 | 23.4 | " |
| 7 | 7.04 | 980 | 23.6 | " |
| 11 | 7.03 | 970 | 23.7 | " |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F | Other |
|--|------|------------------|--|----------------|
| 13 | 7.01 | 1000 | 23.7 | slightly murky |
| Meter Nos. <u>SN 7846</u> <u>092088</u> <u>SN 7846</u> | | | | |

Observations During Purging (Well Condition, Turbidity, Color, Odor):

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: 1"x3' Stainless Steel

☐ Same As Above

☐ Grab - Type:

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:

☐ Other - Type:

SAMPLING DISTRIBUTION

Sample Series:

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lac | Comments |
|-----------------|--------------|--------------------|--------------------------------|-----|----------------|
| MK-3B-23-080390 | 2 x 40ml | 624 | HCL | ATI | |
| " | 1 liter | Inorganics | None | | Field Filtered |
| " | 1 pint | metals | HNO ₃ | | Field Filtered |
| " | 2 x 1 liter | 625 | None | | |
| " | 1 liter | 418.1 | H ₂ SO ₄ | | |
| " | 4oz | NO ₃ | H ₂ SO ₄ | | |

QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| MK-3B-23-080390 | MK-3B-23-080390D |

Blank Samples

| Type | Sample No. |
|------|------------|
|------|------------|

Other Samples

| |
|------------|
| MCK0002836 |
|------------|



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name McKesson S Fe S

Job Number 17333, 158.11

Recorded by [Signature] (Signature)

Well No. MK-SB-25

Well Type: ☒ Monitor ☐ Extraction ☐ Other

Well Material: ☒ PVC ☐ St. Steel ☐ Other

Date 8-3-90 Time

Sampled by TH/DT (Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):

☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other

Total Depth of Casing (TD in feet BTOC): 63.95

Water Level Depth (WL in feet BTOC): 46.44

Number of Well Volumes to be purged (# Vols)

☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE VOLUME CALCULATION:

$$\left(\frac{63.95 - 46.44}{\text{TD (feet)}} \right) \times \frac{4}{\text{WL (feet)}} \times \frac{4}{\text{D (inches)}} \times \frac{4}{\text{\# Vols}} \times 0.0408 = \frac{45.7}{\text{Calculated Purge Volume}} \text{ gallons}$$

PURGE METHOD

☒ Bailer - Type: _____

☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Other - Type: _____

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other

Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC) from _____ to _____

PURGE TIME

12:46 Start 12:58 Stop 12:58 Elapsed

PURGE RATE

Initial 4.5 gpm Final 4.5 gpm ~54 gallons

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F | Other |
|-----------------------------|------|------------------|--|----------------|
| 1 | 7.05 | 1300 | 25.8 | slightly murky |
| 3 | 7.03 | 1300 | 24.3 | slightly murky |
| 5 | 7.00 | 1350 | 25.0 | clear |
| 7 | 7.01 | 1350 | 24.3 | clear |
| 9 | 7.02 | 1400 | 24.3 | clear |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F | Other |
|---|------|------------------|--|------------|
| 11 | 7.02 | 1400 | 24.3 | very clear |
| 12 | 7.02 | 1400 | 24.3 | " |
| Meter Nos. <u>SW 7846</u> / <u>SW 092088</u> / <u>SW 7846</u> | | | | |

Observations During Purging (Well Condition, Turbidity, Color, Odor):

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: 1" x 3' Stainless Steel

☐ Same As Above

☐ Grab - Type: _____

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Other - Type: _____

SAMPLING DISTRIBUTION

Sample Series: _____

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|--|--------------------|--------------------|---------------|------------|-----------------------|
| <u>MK-SB-25-080370</u> | <u>2 x 40ml</u> | <u>624</u> | <u>HCL</u> | <u>ATI</u> | |
| " | <u>1 liter</u> | <u>Inorganics</u> | <u>None</u> | | <u>Field Filtered</u> |
| " | <u>1 pint</u> | <u>Metals</u> | <u>HNO3</u> | | <u>Field Filtered</u> |
| " | <u>3 x 1 liter</u> | <u>625</u> | <u>None</u> | | |
| " | <u>1 liter</u> | <u>418.1</u> | <u>H2SO4</u> | | |
| " | <u>H2O2</u> | <u>NO3</u> | <u>H2SO4</u> | | |
| <u>(1 For 625 QC)</u>
<u>internal lab</u> | | | | | |

QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| | |
| | |
| | |
| | |

Blank Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

Other Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

MCK0002837



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name McKesson S Fe S
Job Number 17333, 158-11
Recorded by Tom Harder
(Signature)

Well No. MK-5B-32
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date 8-3-90 Time 1436
Sampled by TH/DJ
(Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):

☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other

Total Depth of Casing (TD in feet BTOC): 39.1

Water Level Depth (WL in feet BTOC): 34.45

Number of Well Volumes to be purged (# Vols)

☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE VOLUME CALCULATION:

$$\left(\frac{39.1}{\text{TD (feet)}} - \frac{34.45}{\text{WL (feet)}} \right) \times \frac{2}{\text{D (inches)}} \times \text{\# Vols} \times 0.0408 = \text{Calculated Purge Volume} \text{ gallons}$$

PURGE METHOD

☐ Bailer - Type: _____
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____
☐ Other - Type: _____

PUMP INTAKE SETTING

☐ Near Bottom ☐ Near Top ☐ Other _____
Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC) from _____ to _____

PURGE TIME

Start _____ Stop _____ Elapsed _____ Initial _____ gpm Final _____ gpm _____ gallons

PURGE RATE

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T <input type="checkbox"/> °C <input type="checkbox"/> °F | Other _____ |
|-----------------------------|----|------------------|---|-------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T <input type="checkbox"/> °C <input type="checkbox"/> °F | Other _____ |
|-----------------------------|----|------------------|---|-------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Meter Nos. _____

Observations During Purging (Well Condition, Turbidity, Color, Odor): _____

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☐ Other _____

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: 1" x 3' Stainless Steel

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Same As Above

☐ Grab - Type: _____

☐ Other - Type: _____

SAMPLING DISTRIBUTION

Sample Series: _____

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|-----------------|--------------|--------------------|--------------------------------|-----|----------------|
| MK-5B-32-080390 | 2x 1/2 liter | 624 | HCL | ATI | |
| " | 1 liter | Inorganics | None | | Field Filtered |
| " | 1 pint | Metals | HNO ₃ | | Field Filtered |
| " | 2x 1/2 liter | 625 | None | | |
| " | 1 liter | 418.1 | H ₂ SO ₄ | | |
| " | 4oz | NO ₃ | H ₂ SO ₄ | | |
| " | 4oz | 8015 | HCL | | |

QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| | |
| | |
| | |
| | |

Blank Samples

| Type | Sample No. |
|-----------|-------------------|
| Equipment | MK-5B-32-080390 E |
| | |
| | |
| | |

Other Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

MCK0002838



003504

GROUND-WATER SAMPLING FORM

Job Name McKesson S. Fe S.
Job Number 17333, 158.11
Recorded by Tom Harder
(Signature)

Well No. MK-MW-01
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date 10-24-90 Time 9:05
Sampled by TA/DJ (Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC): 70.03
Water Level Depth (WL in feet BTOC): 48.08
Number of Well Volumes to be purged (# Vols):
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE VOLUME CALCULATION:

$$\left(\frac{70.03}{\text{TD (feet)}} - \frac{48.08}{\text{WL (feet)}} \right) \times \frac{4}{\text{D (inches)}}^2 \times \frac{4}{\text{\# Vols}} \times 0.0408 = \underline{57.3} \text{ gallons}$$

Calculated Purge Volume

PURGE TIME

PURGE RATE

ACTUAL PURGE VOLUME

09:09 Start 09:22 Stop 13 Elapsed Initial 6 gpm Final 6 gpm ~ 80 gallons

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (umhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|-----------------------------|------|----------------------|---|-----------|
| 0 | 7.13 | 1200 1200 | 22.9 | |
| 2 | 7.10 | 1200 1200 | 22.2 | murky |
| 4 | 7.04 | 1200 | 22.2 | sl. murky |
| 6 | 7.02 | 1200 | 22.3 | " |
| 8 | 7.02 | 1200 | 22.4 | " |

| Minutes Since Pumping Began | pH | Cond. (umhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other _____ |
|-------------------------------|-------------|------------------|---|-------------|
| 10 | 7.05 | 1200 | 22.4 | clear |
| 12 | 7.10 | 1200 | 22.1 | " |
| 13 | End Pumping | | | |
| Meter Nos. 9697010270887 9701 | | | | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): clear, no odor

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD

@ 9:45

☒ Bailer - Type: 1" x 3' Stainless Steel

☐ Same As Above

☐ Submersible ☐ Centrifugal ☐ Bladder: Pump No.:

☐ Grab - Type:

☐ Other - Type:

SAMPLING DISTRIBUTION

Sample Series:

| Sample No. | Volume Cont. | Analysis Requested | Preservatives | Lab | Comments |
|-----------------------|-----------------|-----------------------|------------------------------------|------------|-----------------------|
| <u>MK-MW-1-162440</u> | <u>1 liter</u> | <u>Gen Mix</u> | <u>Unpress.</u> | <u>ATI</u> | |
| | <u>4oz</u> | <u>NO₃</u> | <u>H₂SO₄</u> | | |
| | <u>4oz</u> | <u>pH</u> | <u>Unpress</u> | | |
| | <u>500ml</u> | <u>metals</u> | <u>HNO₃</u> | | |
| | <u>2 x 40ml</u> | <u>8240/624</u> | <u>HCL</u> | | <u>Field Filtered</u> |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

QUALITY CONTROL SAMPLES

@ 9:50 Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|-----------------------|------------------------|
| <u>MK-MW-1-162440</u> | <u>MK-MW-1-162440P</u> |
| | |
| | |
| | |

Blank Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

Other Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

MCK0002839



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name McKesson S. Fe S.
Job Number 17333, 158, 11
Recorded by [Signature]
(Signature)

Well No. MK-MW-2
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date 10-23-90 Time 7:10
Sampled by TH/DI
(Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC): 70.26
Water Level Depth (WL in feet BTOC): 45.02
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type: _____
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____
☐ Other - Type: _____

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC)
from _____ to _____

PURGE VOLUME CALCULATION:

$(70.26 - 45.02) \times 4^2 \times 4 \times 0.0408 = 65.9$ gallons
TD (feet) WL (feet) D (inches) # Vols Calculated Purge Volume

PURGE TIME

7:12 Start 7:23 Stop 11 min Elapsed

PURGE RATE

Initial 7 gpm Final 7 gpm ~78 gallons

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F | Other |
|-----------------------------|------|------------------|--|--|
| 7:12 (0.5) | 6.95 | 1400 | 20.4 | Opaline brown
~34c SSB, m
slightly murky |
| 2.5 | 7.02 | 1200 | 20.9 | |
| 5 | 7.06 | 1200 | 21.1 | ~7 gal/min |
| 7 | 7.09 | 1200 | 21.3 | clear |
| 9 | 7.06 | 1200 | 21.4 | clear pump surging |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F | Other |
|------------------------------------|------|------------------|--|-------|
| 11 | 7.05 | 1200 | 21.4 | clear |
| | | | | |
| | | | | |
| | | | | |
| Meter Nos. 5/17901 0270887 5/17901 | | | | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): Constant flow (constant), no odor, well in good condition

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD

Sample @ 7:40 10/24/90

☐ Same As Above

☒ Bailer - Type: 1" x 3' Stainless Steel

☐ Grab - Type: _____

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Other - Type: _____

SAMPLING DISTRIBUTION

Sample Series: _____

| Sample No. | Volume Cont. | Analysis Requested | Preservatives | Lab | Comments |
|-------------|--------------|--------------------|--------------------------------|-----|-------------------|
| MW-2-10249C | 1 liter | General minerals | Unpress | ATI | |
| " | 4 oz/poly | NO ₃ | H ₂ SO ₄ | " | Filtered (0.45 µ) |
| " | 4 oz/poly | pH | Unpress | " | |
| " | 500-ml/poly | metals | HNO ₃ | " | |
| " | 2-40-ml | 8240/624 | HCl | " | |
| | | | | | |
| | | | | | |
| | | | | | |

QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| | |
| | |
| | |

Blank Samples

| Type | Sample No. |
|--------|------------------|
| Travel | MK-MW-2-10249C B |
| | |
| | |

Other Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |

MCK0002840



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name McKesson S. Fe S.
Job Number 17333, 158.11
Recorded by [Signature]
(Signature)

Well No. MK-MW-3
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date 10-24-90 Time 10:30
Sampled by TH/DJ
(Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC): 70.10
Water Level Depth (WL in feet BTOC): 48.76
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type: _____
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____
☐ Other - Type: _____

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC)
from _____ to _____

PURGE VOLUME CALCULATION:

$(70.10 - 48.76) \times 4^2 \times 4 \times 0.0408 = 55.7$ gallons
TD (feet) WL (feet) D (inches) # Vols Calculated Purge Volume

PURGE TIME

10:37 Start 10:45 Stop 8 min Elapsed

PURGE RATE

Initial 7.5 gpm Final 7.5 gpm ~60 gallons

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F | Other |
|-----------------------------|-------------|------------------|--|------------------------------|
| <u>10:37 (0.5)</u> | <u>7.20</u> | <u>1200</u> | <u>22.6</u> | <u>Slightly opaque brown</u> |
| <u>2.5</u> | <u>7.15</u> | <u>1250</u> | <u>21.6</u> | <u>clear</u> |
| <u>5</u> | <u>7.09</u> | <u>1250</u> | <u>21.2</u> | <u>clear</u> |
| <u>7</u> | <u>7.08</u> | <u>1250</u> | <u>21.5</u> | <u>"</u> |
| <u>8</u> | <u>7.07</u> | <u>1250</u> | <u>21.5</u> | <u>"</u> |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F | Other |
|---|----|------------------|--|-------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Meter Nos. <u>7901</u> <u>0270887</u> <u>7901</u> | | | | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): no odor, constant flow, well in good condition

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drums

WELL SAMPLING

SAMPLING METHOD

@ 11:00 10-24-90

☒ Bailer - Type: 1" x 3' Stainless Steel
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Same As Above

☐ Grab - Type: _____

☐ Other - Type: _____

SAMPLING DISTRIBUTION

Sample Series: _____

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|-----------------------|---------------------|--------------------|-----------------|------------|----------|
| <u>MK-MW-3-102490</u> | <u>4oz/ply</u> | <u>pH</u> | <u>Unpress.</u> | <u>ATI</u> | |
| <u>"</u> | <u>2-40oz/glass</u> | <u>8240/024</u> | <u>HCL</u> | <u>"</u> | |
| | | | | | |
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| | | | | | |
| | | | | | |
| | | | | | |

QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| | |
| | |
| | |
| | |

Blank Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

Other Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

MCK0002841



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name McKesson S. Fe.S.
Job Number 17533, 158.11
Recorded by [Signature]

Well No. MK-SB-4
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date 10-24-90 Time _____
Sampled by TH/DJ BC

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC): 64.21
Water Level Depth (WL in feet BTOC): 44.88
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailor - Type: _____
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____
☐ Other - Type: _____

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC)
from _____ to _____

PURGE VOLUME CALCULATION:

$(64.21 - 44.88) \times 4^2 \times 4 \times 0.0408 = 50.5$ gallons
TD (feet) WL (feet) D (inches) # Vols Calculated Purge Volume

PURGE TIME

13:41 Start 13:52 Stop 11 min Elapsed

PURGE RATE

Initial 5 gpm Final 5 gpm ≈ 55 gallons

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F | Other |
|-----------------------------|-------------|------------------|--|-----------------------|
| <u>13:41 (0.5)</u> | <u>7.13</u> | <u>1100</u> | <u>25.0</u> | <u>Fairly clear</u> |
| <u>2.5</u> | <u>7.14</u> | <u>1200</u> | <u>24.6</u> | <u>Slightly murky</u> |
| <u>5</u> | <u>7.14</u> | <u>1200</u> | <u>23.1</u> | <u>Fairly clear</u> |
| <u>7</u> | <u>7.13</u> | <u>1200</u> | <u>22.9</u> | <u>clear</u> |
| <u>9.5</u> | <u>7.12</u> | <u>1200</u> | <u>22.8</u> | <u>very clear</u> |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F | Other |
|---|-------------|------------------|--|-------------------|
| <u>11</u> | <u>7.12</u> | <u>1200</u> | <u>22.8</u> | <u>very clear</u> |
| Meter Nos <u>SN 19010270887</u> <u>7901</u> | | | | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): No odor, well in good condition, constant flow

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD

@ 14:06 10-24-90

☒ Bailor - Type: 1" x 3' Stainless Steel

☐ Same As Above

☐ Grab - Type: _____

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Other - Type: _____

SAMPLING DISTRIBUTION

Sample Series: _____

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|-----------------------|---------------------|---------------------------|-------------------|------------|----------|
| <u>MK-SB-4-102490</u> | <u>2-40mL glass</u> | <u>8240/624</u> | <u>HCL</u> | <u>ATI</u> | |
| <u>"</u> | <u>1-liter/poly</u> | <u>General inorganics</u> | <u>unpress DS</u> | | |
| <u>"</u> | <u>4oz/poly</u> | <u>pH</u> | <u>unpress</u> | | |
| <u>"</u> | <u>1oz/poly</u> | <u>metals</u> | <u>H2SO4 DS</u> | | |
| <u>"</u> | <u>5oz-4/poly</u> | <u>metals</u> | <u>HNO3 DS</u> | | |

QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|-----------------------|------------------------|
| <u>MK-SB-4-102490</u> | <u>MK-SB-4-102490D</u> |

Blank Samples

| Type | Sample No. |
|------|------------|
|------|------------|

Other Samples

| Type | Sample No. |
|------|-------------------|
| | <u>MCK0002842</u> |



Job Name McKesson S. FeS.
Job Number 17333, 158.11
Recorded by Tom Harder
(Signature)

Well No. MK-SB-7
Well Type: ☒ Monitor ☐ Extraction ☐ Other _____
Well Material: ☒ PVC ☐ St. Steel ☐ Other _____
Date 10-24-90 Time 14:45
Sampled by TH/DJ (Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):

☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other _____

Total Depth of Casing (TD in feet BTOC): 63.71

Water Level Depth (WL in feet BTOC): 47.20

Number of Well Volumes to be purged (# Vols)

☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other _____

PURGE VOLUME CALCULATION:

$$\left(\frac{\text{TD (feet)}}{\text{WL (feet)}} \right) \times \frac{D \text{ (inches)}^2}{\# \text{ Vols}} \times 0.0408 = \frac{43.1}{\text{Calculated Purge Volume}} \text{ gallons}$$

PURGE METHOD

☐ Bailor - Type: _____

☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Other - Type: _____

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other _____

Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC) from _____ to _____

PURGE TIME

14:48 Start 14:56 Stop 8 Elapsed

PURGE RATE

Initial 5.7 gpm Final 5.7 gpm ~50 gallons

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|-----------------------------|------|------------------|---|----------|
| 0 | 7.20 | 1000 | 26.5 | murky |
| 2 | 7.21 | 1100 | 23.3 | " |
| 3 | 7.20 | 1200 | 22.7 | " |
| 5 | 7.19 | 1200 | 22.6 | " |
| 6 | 7.18 | 1200 | 22.5 | sl murky |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|--------------------------------|------|------------------|---|----------|
| 8 | 7.16 | 1200 | 22.6 | sl murky |
| | | | | |
| | | | | |
| | | | | |
| Meter Nos/SN 74010270187 17401 | | | | |

Observations During Purging (Well Condition, Turbidity, Color, Odor):

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD

@ 18:00 10-24-90

☒ Bailor - Type 1" x 3' Stainless Steel

☐ Same As Above

☐ Grab - Type: _____

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Other - Type: _____

SAMPLING DISTRIBUTION

Sample Series: _____

| Sample No. | Volume Cont. | Analysis Requested | Preservatives | Lab | Comments |
|-----------------------|-----------------|--------------------|---------------|------------|----------|
| <u>MK-SB-7-102490</u> | <u>2 x 40ml</u> | <u>8290/1-24</u> | <u>HCL</u> | <u>ATI</u> | |
| | <u>402</u> | <u>pH</u> | <u>None</u> | <u>ATI</u> | |
| | | | | | |
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QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
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| | |

Blank Samples

| Type | Sample No. |
|--------------|------------------------|
| <u>Equip</u> | <u>MK-SB-7-102490E</u> |
| | |
| | |

Other Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |

MCK0002843



Job Name McKesson S, Fe S
Job Number 17333, 158.11
Recorded by Tom Harder
(Signature)

Well No. MK-SB-10
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date 10-24-90 Time TH/DJ
Sampled by TH/DJ
(Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC): 65.50
Water Level Depth (WL in feet BTOC): 49.33
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailor - Type: _____
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____
☐ Other - Type: _____

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC)
from _____ to _____

PURGE VOLUME CALCULATION:

$$\left(\frac{65.50 - 49.33}{1} \right) \times \frac{4^2}{4} \times 4 \times 0.0408 = 42.2 \text{ gallons}$$

TD (feet) WL (feet) D (inches) # Vols Calculated Purge Volume

PURGE TIME

PURGE RATE

ACTUAL PURGE VOLUME

11:25 Start 11:34 Stop 9 Elapsed Initial _____ gpm Final _____ gpm ~55 gallons

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | Turb. NTU | Other |
|-----------------------------|------|------------------|-----------|----------|
| 1 | 7.28 | 1100 | 23.2 | murky |
| 3 | 7.23 | 1200 | 21.9 | " |
| 5 | 7.20 | 1200 | 21.8 | sl murky |
| 6 | 7.19 | 1200 | 21.5 | " |
| 8 | 7.17 | 1200 | 21.8 | " |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | Turb. NTU | Other |
|-----------------------------|------|------------------|-----------|-------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Meter Nos | 7401 | 1027087 | 7901 | 1 |

Observations During Purging (Well Condition, Turbidity, Color, Odor): sl murky, brown, no odor
Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD @ 11:50 10-24-90

☒ Bailor - Type: 1" x 3' Stainless Steel ☐ Same As Above
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____ ☐ Grab - Type: _____
☐ Other - Type: _____

SAMPLING DISTRIBUTION Sample Series: _____

| Sample No. | Volume Cont. | Analysis Requested | Preservatives | Lab | Comments |
|--------------------------|-----------------|--------------------|---------------|------------|----------|
| <u>MK-SB-10-10-24-90</u> | <u>2 x 40ml</u> | <u>8240/624</u> | <u>HCL</u> | <u>ATI</u> | |
| | <u>4oz</u> | <u>NO3</u> | <u>H2SO4</u> | | |
| | <u>4oz</u> | <u>pH</u> | <u>none</u> | | |
| | <u>500ml</u> | <u>metals</u> | <u>HNO3</u> | | |
| | <u>1 liter</u> | <u>Gen Min</u> | <u>None</u> | | |
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QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
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Blank Samples

| Type | Sample No. |
|------|------------|
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| | |

Other Samples

| Type | Sample No. |
|------|------------|
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| | |

MCK0002844



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name McKesson S. Fe S.
Job Number 17333, 158, 11
Recorded by [Signature]
(Signature)

Well No. MK-SB-13
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date 10-24-90 Time 8:15
Sampled by TH/DJ
(Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC): 62.48
Water Level Depth (WL in feet BTOC): 46.60
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE VOLUME CALCULATION:

$$\left(\frac{62.48}{\text{TD (feet)}} - \frac{46.60}{\text{WL (feet)}} \right) \times \frac{4}{\text{D (inches)}}^2 \times \frac{4}{\text{\# Vols}} \times 0.0408 = \frac{41.5}{\text{Calculated Purge Volume}} \text{ gallons}$$

PURGE METHOD

☐ Bailer - Type: _____
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____
☐ Other - Type: _____

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC)
from _____ to _____

PURGE TIME

8:20 Start 8:27 Stop _____ Elapsed Initial 7 gpm Final 7.2 gpm 52 gallons

PURGE RATE

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|-----------------------------|-------------|------------------|---|-----------------------------------|
| <u>8:20 (0.5)</u> | <u>7.10</u> | <u>1150</u> | <u>21.3</u> | <u>Slightly opaque brown</u> |
| <u>2.5</u> | <u>7.07</u> | <u>1200</u> | <u>21.4</u> | <u>220 gallons</u> |
| <u>5</u> | <u>7.08</u> | <u>1200</u> | <u>21.8</u> | <u>clear</u> |
| <u>7</u> | <u>7.08</u> | <u>1200</u> | <u>21.8</u> | <u>clear</u>
<u>50 gallons</u> |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|--|----|------------------|---|-------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Meter Nos. <u>SN 701 0270887 SN 7901</u> | | | | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): no odor, well in good condition, constant flow

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD

@ 8:40 10-24-90
☒ Bailer - Type: 1" x 3' Stainless Steel ☐ Same As Above
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____ ☐ Grab - Type: _____
☐ Other - Type: _____

SAMPLING DISTRIBUTION

Sample Series: _____

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|------------------------|-----------------------|--------------------|----------------|------------|----------|
| <u>MK-SB-13-102490</u> | <u>402/pt</u> | <u>pH</u> | <u>Unpress</u> | <u>ATI</u> | |
| <u>"</u> | <u>2-40 ~ V glass</u> | <u>8240/624</u> | <u>HCL</u> | <u>"</u> | |
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QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
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Blank Samples

| Type | Sample No. |
|------|------------|
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| | |

Other Samples

| Type | Sample No. |
|------|------------|
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MCK0002845



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name McKesson Santa Fe Spys
Job Number 17333, 158-11
Recorded by [Signature]

Well No. NK-SB-20
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date 10-25-90 Time 8:15
Sampled by TH/DJ

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC): 64.02
Water Level Depth (WL in feet BTOC): 49.45
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type: _____
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____
☐ Other - Type: _____

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC)
from _____ to _____

PURGE VOLUME CALCULATION:

$(64.02 - 49.45) \times 4^2 \times 4 \times 0.0408 = 38$ gallons
TD (feet) WL (feet) D (inches) # Vols Calculated Purge Volume

PURGE TIME

8:17 Start 8:24 Stop 7 min Elapsed

PURGE RATE

Initial 7 gpm Final 7 gpm ≈ 48 gallons

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (umhos/cm) | T <input type="checkbox"/> °C <input type="checkbox"/> °F | Other |
|-----------------------------|------|------------------|---|------------|
| 8:17 (0) | | 1800 | 20.7 | clear |
| 1 | 6.57 | 1800 | 20.7 | clear |
| 3 | 6.74 | 1350 | 21.2 | " |
| 5 | 6.84 | 1200 | 21.1 | very clear |
| 7 | 6.88 | 1200 | 21.2 | " |

| Minutes Since Pumping Began | pH | Cond. (umhos/cm) | T <input type="checkbox"/> °C <input type="checkbox"/> °F | Other |
|-----------------------------|-------------------|------------------|---|-------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Meter Nos. | 7901 0270817 7901 | | | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): No odor, well in good condition, constant flow

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD

@ 8:34 10-25-90

☒ Bailer - Type: 1" x 3' Stainless Steel

☐ Same As Above

☐ Grab - Type: _____

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Other - Type: _____

SAMPLING DISTRIBUTION

Sample Series: _____

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|-----------------|--------------|--------------------|---------------|-----|----------|
| MK-SB-20-102590 | 2 x 40ml | 8240/624 | HCL | ATI | |
| | 402 | pH | none | " | |
| | | | | | |
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QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
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Blank Samples

| Type | Sample No. |
|--------|-------------------|
| Travel | MK-SB-20-102590 B |
| | |
| | |
| | |

Other Samples

| Type | Sample No. |
|------|------------|
| | MCK0002847 |
| | |
| | |
| | |



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name McKesson Santa Fe Springs
Job Number 17333, 158 11
Recorded by Tom Harder

Well No. MK-SB-25
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date 10-25-90 Time _____
Sampled by TH/DJ (Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6 inch ☐ Other
Total Depth of Casing (TD in feet BTOC): 64.16
Water Level Depth (WL in feet BTOC): 46.79
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type: _____
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____
☐ Other - Type: _____

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC)
from _____ to _____

PURGE VOLUME CALCULATION:

$(64.16 - 46.79) \times 4^2 \times 4 \times 0.0408 = 45$ gallons
TD (feet) WL (feet) D (inches) # Vols Calculated Purge Volume

PURGE TIME

0912 Start 0919 Stop 7 Elapsed

PURGE RATE

Initial _____ gpm Final _____ gpm ~55 gallons

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond (µmhos/cm) | T $\begin{matrix} \text{°C} \\ \text{°F} \end{matrix}$ | Other |
|-----------------------------|------|-----------------|--|-------|
| 0 | 7.19 | 1200 | 23.1 | murky |
| 2 | 7.06 | 1200 | 22.5 | |
| 4 | 7.02 | 1300 | 22.3 | clear |
| 5 | 7.01 | 1300 | 22.3 | " |
| 7 | 6.99 | 1300 | 22.5 | " |

| Minutes Since Pumping Began | pH | Cond (µmhos/cm) | T $\begin{matrix} \text{°C} \\ \text{°F} \end{matrix}$ | Other |
|-----------------------------|----|-----------------|--|-------------|
| | | | | |
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| | | | | |
| Meter Nos. <u>90</u> | | <u>EP-2</u> | <u>7401/0270887</u> | <u>7401</u> |

Observations During Purging (Well Condition, Turbidity, Color, Odor): clear, no odor

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: 1" x 3' Stainless Steel
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Same As Above

☐ Grab - Type: _____

☐ Other - Type: _____

SAMPLING DISTRIBUTION

Sample Series: _____

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|------------------------|-----------------|--------------------|---------------|------------|----------|
| <u>MK-SB-25-10A590</u> | <u>2 x 40ml</u> | <u>8240/624</u> | <u>HCL</u> | <u>ATI</u> | |
| | <u>402</u> | <u>pH</u> | <u>none</u> | <u>"</u> | |
| | | | | | |
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QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
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Blank Samples

| Type | Sample No. |
|------|------------|
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| | |

Other Samples

| Type | Sample No. |
|------|------------|
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MCK0002849



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name McKesson S. Fe S.
Job Number 17333, 158.11
Recorded by Torn Hunder
Signature

Well No. AK-SB-32
Well Type: ☒ Monitor ☐ Extraction ☐ Other _____
Well Material: ☒ PVC ☐ St. Steel ☐ Other _____
Date 10-24-90 Time _____
Sampled by TH/PS
(Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other _____
Total Depth of Casing (TD in feet BTOC): 39.29
Water Level Depth (WL in feet BTOC): 36.64
Number of Well Volumes to be purged (# Vols):
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other _____

PURGE METHOD

☒ Bailor - Type: 3" x 3' Stainless Steel
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____
☐ Other - Type: _____

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other _____
Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC)
from _____ to _____

PURGE VOLUME CALCULATION:

$$\left(\frac{39.29 - 36.64}{1} \right) \times \frac{4^2}{4} \times 4 \times 0.0408 = 6.9 \text{ gallons}$$

TD (feet) WL (feet) D (inches) # Vols Calculated Purge Volume

PURGE TIME

12:25 Start 12:29 Stop 4 Elapsed

PURGE RATE

Initial _____ gpm Final _____ gpm 0.5 gallons

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (umhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|-----------------------------|------|------------------|---|-------|
| 0 | 6.93 | 900 | 25.8 | clear |
| 1 | 6.94 | 1000 | 22.7 | mucky |
| 3 | 6.93 | 1100 | 23.0 | " |
| 4 | well | | Dry | 5 gal |

| Minutes Since Pumping Began | pH | Cond. (umhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|--|----|------------------|---|-------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Meter Nos. <u>SN 7901 / 0270887 / 7901</u> | | | | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): Mucky brown, no odor.

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD

☒ Bailor - Type: 1" x 3' Stainless Steel
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Same As Above

☐ Grab - Type: _____

☐ Other - Type: _____

SAMPLING DISTRIBUTION

Sample Series: _____

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|-----------------|--------------|--------------------|--------------------------------|-----|----------|
| MK-SB-32-102590 | 2 x 40ml | 8240/624 | HCL | | |
| | 4oz | NO ₃ | H ₂ SO ₄ | | |
| | 4oz | pH | None | | |
| | 500ml | Metals | HNO ₃ | | |
| | 1 L | Gen Min | None | | |
| | | | | | |
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QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
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Blank Samples

| Type | Sample No. |
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| | |

Other Samples

| Type | Sample No. |
|------|------------|
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MCK0002850



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name Mckesson Santa Fe Springs

Job Number 17333, 166.11

Recorded by [Signature]

Well No. MK-MW-01

Well Type: ☒ Monitor ☐ Extraction ☐ Other

Well Material: ☒ PVC ☐ St. Steel ☐ Other

Date 2-11-91 Time 12:10

Sampled by TH/DJ (initials) check 2/12/91 BCh: Lwk

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):

☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other

Total Depth of Casing (TD in feet BTOC): 70.05

Water Level Depth (WL in feet BTOC): 48.67

Number of Well Volumes to be purged (# Vols)

☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailor - Type: _____

☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Other - Type: _____

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other

Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC) from _____ to _____

PURGE VOLUME CALCULATION:

$$\left(\frac{70.05 - 48.67}{1} \right) \times \frac{4^2}{4} \times 0.0408 = 56 \text{ gallons}$$

TD (feet) WL (feet) D (inches) # Vols Calculated Purge Volume

PURGE TIME

12:17 Start 12:27 Stop _____ Elapsed _____

PURGE RATE

Initial 7.9 gpm Final 7 gpm ~ 73 gallons

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F | Other |
|-----------------------------|------|------------------|--|-----------------------|
| 1 | 6.99 | 1778 | 24.7 | W.C. 47.59 / pump in |
| 3 | 7.04 | 1720 | 24.4 | Slightly cloudy water |
| 6 | 7.05 | 1680 | 24.1 | W.C. 48.74 |
| 9 | 7.04 | 1672 | 24.1 | ~ 7.9 gal/min |
| 10 | 7.05 | 1670 | 24.1 | v. clear |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F | Other |
|-----------------------------|----------------|------------------|--|-------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Meter Nos. | Orion 570 7846 | HyDac 510 9005 | Orion 570 7846 | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): well is in good condition, v. clear water, low turbidity

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD

@ 12:40

☒ Bailor - Type: 1" x 3' stainless steel

☐ Same As Above

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Grab - Type: _____

☐ Other - Type: _____

SAMPLING DISTRIBUTION

Sample Series: _____

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|-----------------|--------------|--------------------|---------------|-----|----------|
| MK-MW-01-021191 | 2-40m/Vol's | 3240 | HCL | ATI | |
| " | 1-40m/poly | 150.1 (pH) | Unpres. | " | |
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QUALITY CONTROL SAMPLES

Duplicate Samples @ 12:50

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| MK-MW-01-021191 | MK-MW-01-021191D |
| | (2-40m/Vol's) |
| | |
| | |
| | |

Blank Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

Other Samples

| Sample No. |
|------------|
| MCK0002851 |
| |
| |
| |



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name Mckisson-Santa Fe Springs

Job Number 17333-166-11

Recorded by [Signature]

Well No. mk-mw-02

Well Type: ☒ Monitor ☐ Extraction ☐ Other

Well Material: ☒ PVC ☐ St. Steel ☐ Other

Date 2-11-91 Time 10:05

Sampled by DS & TH check 2/2/91 BC

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):

☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other

Total Depth of Casing (TD in feet BTOC): 70.24

Water Level Depth (WL in feet BTOC): 44.96

Number of Well Volumes to be purged (# Vols)

☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type:

☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:

☐ Other - Type:

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other

Depth in feet (BTOC): from to Screen Interval in Feet (BTOC)

PURGE VOLUME CALCULATION:

$$\left(\frac{70.24 - 44.96}{25.28} \right) \times \frac{4^2}{4} \times 0.0408 = \approx 66 \text{ gallons}$$

TD (feet) 25.28 WL (feet) D (inches) # Vols Calculated Purge Volume

PURGE TIME

10:21 Start 10:31 Stop 10 min Elapsed

PURGE RATE

Initial 7.5 gpm Final 7.5 gpm = 75 gallons

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F | Other |
|-----------------------------|------|------------------|--|-----------------------------|
| 0.5 | 7.08 | 1592 | 23.1 | murky brn |
| 2.5 | 7.14 | 1655 | 23.1 | slightly cloudy brn (murky) |
| 5 | 7.13 | 1682 | 23.1 | clearing up |
| 9 | 7.13 | 1685 | 23.2 | clearing up |
| 10:31 | 7.14 | 1685 | 23.1 | clear |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T <input type="checkbox"/> °C <input type="checkbox"/> °F | Other |
|-----------------------------|------|------------------|---|-------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Meter Nos. | 7946 | 429005 | 7846 | |

Observations During Purging (Well Condition, Turbidity, Color, Odor):

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other SS gallon drum

WELL SAMPLING

SAMPLING METHOD

@ 10:45

☒ Bailer - Type: 1" x 3' stainless steel

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:

☐ Same As Above

☐ Grab - Type:

☐ Other - Type:

SAMPLING DISTRIBUTION

Sample Series:

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|-----------------|--------------|--------------------|---------------|-----|----------|
| mk-mw-02-02191A | 2-40ml vials | 4240 | HCL | ATI | |
| " | 1-402/poly | 1501 (pH) | Unpres | " | |
| " | 1-1603/poly | metals | HNO3 | " | |
| " | 1-liter/poly | Gen. Minerals | Unpres | " | |
| | | | | | |
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QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| | |
| | |
| | |
| | |

Tru-1

Blank Samples

| Type | Sample No. |
|----------------|-----------------|
| Tru-1 | mk-mw-02-02191B |
| (2-40ml vials) | |
| | |
| | |

Other Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

MCK0002852

**Harding Lawson Associates**Engineering and
Environmental Services**GROUND-WATER SAMPLING FORM**Job Name Mexican-Santa Fe SpringsJob Number 17333, 166-11Recorded by Tom Harder
(Signature)Well No. MK-MW-03Well Type: ☒ Monitor ☐ Extraction ☐ OtherWell Material: ☒ PVC ☐ St. Steel ☐ OtherDate 2-11-91 TimeSampled by TH & DS check 2/14/91 3Chabuk
(Initials)**WELL PURGING****PURGE VOLUME**

Casing Diameter (D in inches):

☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ OtherTotal Depth of Casing (TD in feet BTOC): 70.09Water Level Depth (WL in feet BTOC): 48.67

Number of Well Volumes to be purged (# Vols)

☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other**PURGE METHOD**☐ Bailer - Type:☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:☐ Other - Type:**PUMP INTAKE SETTING**☒ Near Bottom ☐ Near Top ☐ OtherDepth in feet (BTOC): Screen Interval in Feet (BTOC)
from to**PURGE VOLUME CALCULATION:**

$$\left(\frac{70.09 - 48.67}{1} \right) \times \frac{4^2}{4} \times 0.0408 = 55.9 \text{ gallons}$$

TD (feet) WL (feet) D (inches) # Vols Calculated Purge Volume

PURGE TIME

1332 Start 1340 Stop 8 Elapsed

PURGE RATE

Initial 6 gpm Final 7 gpm ~ 55 gallons

ACTUAL PURGE VOLUME**FIELD PARAMETER MEASUREMENT**

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T °C / °F | Other |
|-----------------------------|------|------------------|-----------|------------------|
| 0 | 7.06 | 1875 | 24.2 | very murky brown |
| 3 | 7.12 | 1747 | 22.9 | slightly murky |
| 5 | 7.15 | 1728 | 23.3 | " W.L. = 48.95 |
| 7 | 7.14 | 1716 | 23.2 | slightly murky |
| 8 | 7.16 | 1719 | 23.2 | clear |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T °C / °F | Other |
|-----------------------------|----|------------------|-----------|-------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Meter Nos. 4046 9005 7846

Observations During Purging (Well Condition, Turbidity, Color, Odor): clear, slight organic? odor,Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum**WELL SAMPLING****SAMPLING METHOD** @ 13:50☒ Bailer - Type: 1" x 3' Stainless Steel☐ Same As Above☐ Grab - Type:☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:☐ Other - Type:**SAMPLING DISTRIBUTION**

Sample Series:

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|-----------------|---------------|--------------------|------------------|-----|----------|
| MK-MW-03-021191 | 2-40ml vials | 8240 | HCL | ATI | |
| " | 1-4oz / poly | 150.1 (pH) | Unpres. | " | |
| " | 1-16oz / poly | Metals | HNO ₃ | " | |
| " | 1-16oz / poly | Gen. Minerals | Unpres. | " | |
| | | | | | |
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QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
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Blank Samples

| Type | Sample No. |
|------|------------|
| | |
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| | |

Other Samples

| Type | Sample No. |
|------|------------|
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| | |
| | |

MCK0002853



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name McKesson Santa Fe Springs
Job Number 17333, 166.11
Recorded by Tom Harider
(Signature)

Well No. MK-SB-4
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date 2-11-91 Time
Sampled by TH / DJ Check 2/12/91 Echo
(Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC): 64.21
Water Level Depth (WL in feet BTOC): 44.81
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type: _____
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____
☐ Other - Type: _____

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC)
from _____ to _____

PURGE VOLUME CALCULATION:

$(64.21 - 44.81) \times 4^2 \times 4 \times 0.0408 = 50.66$ gallons
TD (feet) WL (feet) D (inches) # Vols Calculated Purge Volume

PURGE TIME

15:38 Start 15:45 Stop 7 Elapsed

PURGE RATE

Initial 8 gpm Final _____ gpm 52 gallons

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (umhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|-----------------------------|------|------------------|---|----------------|
| 0 | 7.13 | 1706 | 23.0 | 44.71=WL |
| 3 | 7.12 | 1698 | 22.8 | Murky gm-3m |
| 5 | 7.11 | 1689 | 22.7 | WL=46.23 |
| 7 | 7.11 | 1680 | 22.8 | slightly murky |
| | | | | WL=46.10 |
| | | | | slightly murky |
| | | | | WL=46.14 |

| Minutes Since Pumping Began | pH | Cond. (umhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|-----------------------------|----------|------------------|---|-------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Meter Nos. | S/N 7846 | S/N 9005 | S/N 7846 | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): Good Condition, Slightly murky, no odor
Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD @ 15:55

☒ Bailer - Type: 1" x 3' Stainless Steel
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Same As Above

☐ Grab - Type: _____

☐ Other - Type: _____

SAMPLING DISTRIBUTION

Sample Series: _____

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|----------------|--------------|--------------------|---------------|-----|----------|
| MK-SB-4-021191 | 2 x 40ml | 8240 | HCL | ATT | |
| " | 1-402/40ml | 150.1 | Unpres. | " | |
| | | | | | |
| | | | | | |
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QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| | |
| | |
| | |

@ 16:00

Blank Samples

| Type | Sample No. |
|-----------|-----------------|
| Equipment | MK-SB-4-021191E |
| | (2-40ml/vials) |
| | |
| | |

Other Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

MCK0002854



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name McKesson Santa Fe Springs

Job Number 17333, 16411

Recorded by [Signature]

Well No. MA-SB-7

Well Type: ☒ Monitor ☐ Extraction ☐ Other

Well Material: ☒ PVC ☐ St. Steel ☐ Other

Date 2-12-91 Time

Sampled by TH / DJ 36/2/15/91

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):

☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other

Total Depth of Casing (TD in feet BTOC): 63.70

Water Level Depth (WL in feet BTOC): 47.12

Number of Well Volumes to be purged (# Vols)

☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type:

☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:

☐ Other - Type:

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other

Depth in feet (BTOC): Screen Interval in Feet (BTOC)
from to

PURGE VOLUME CALCULATION:

$$\left(\frac{63.70}{\text{TD (feet)}} - \frac{47.12}{\text{WL (feet)}} \right) \times \frac{4^2}{\text{D (inches)}} \times \frac{4}{\text{\# Vols}} \times 0.0408 = \frac{42.4}{\text{Calculated Purge Volume}} \text{ gallons}$$

PURGE TIME

8:39 Start 8:45 Stop 6 Elapsed

PURGE RATE

Initial 8.5 gpm Final 8.5 gpm ~52 gallons

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T °C / °F | Other |
|-----------------------------|------|------------------|-----------|-----------------|
| 0.5 | 6.92 | 1465 | 20.9 | slightly cloudy |
| 3 | 6.95 | 1570 | 21.2 | cloudy |
| 6 | 6.93 | 1580 | 21.3 | clear |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T °C / °F | Other |
|-----------------------------|------|------------------|-----------|-------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Meter Nos. | 7846 | 9005 | 7846 | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): well is good condition, no odor, no direct turbidity

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD

08.50

☒ Bailer - Type: 1"x3' Stainless Steel

☐ Same As Above

☐ Grab - Type:

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:

☐ Other - Type:

SAMPLING DISTRIBUTION

Sample Series:

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|----------------|--------------|--------------------|---------------|-----|----------|
| MA-SB-7-021291 | 2 x 40ml | 8240 | HCL | ATT | |
| " | 4oz / p.ly | 150.1 (pH) | unpres | " | |
| | | | | | |
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QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
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| | |
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Blank Samples

| Type | Sample No. |
|--------|-----------------|
| Tracer | MA-SB-7-021291B |
| | |
| | |
| | |

Other Samples

| Type | Sample No. |
|------|------------|
| | |
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MCK0002855



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name Mckesson Santa Fe Springs
Job Number 17333, 166, 11
Recorded by [Signature]

Well No. MK-SB-10
Well Type: ☒ Monitor ☐ Extraction ☐ Other _____
Well Material: ☒ PVC ☐ St. Steel ☐ Other _____
Date 2-11-91 Time 14:15
Sampled by TH / DT check 2/24/91 BC/12 link
(Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other _____
Total Depth of Casing (TD in feet BTOC): 65.50
Water Level Depth (WL in feet BTOC): 49.26
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other _____

PURGE METHOD

☐ Bailer - Type: _____
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____
☐ Other - Type: _____

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other _____
Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC)
from _____ to _____

PURGE VOLUME CALCULATION:

$$\left(\frac{65.5}{\text{TD (feet)}} - \frac{49.26}{\text{WL (feet)}} \right) \times \frac{4}{\text{D (inches)}}^2 \times \frac{4}{\text{= Vols}} \times 0.0408 = \underline{42.4} \text{ gallons}$$

Calculated Purge Volume

PURGE TIME

14:30 Start 14:37 Stop 7 min Elapsed

PURGE RATE

Initial 7.9 gpm Final 7 gpm 50.7 gallons

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T $\begin{smallmatrix} \square \\ \square \end{smallmatrix} \begin{smallmatrix} ^\circ\text{C} \\ ^\circ\text{F} \end{smallmatrix}$ | Other |
|-----------------------------|------|------------------|---|-------------------------------|
| 0.5 | 7.11 | 1755 | 23.4 | W.C. 49.20' / Slightly cloudy |
| 2.5 | 7.08 | 1700 | 22.8 | W.C. = 52.46' |
| 5.5 | 7.05 | 1684 | 22.5 | W.C. = 52.57' |
| 7 | 7.04 | 1671 | 22.6 | Kindy clear = 7.37 |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T $\begin{smallmatrix} \square \\ \square \end{smallmatrix} \begin{smallmatrix} ^\circ\text{C} \\ ^\circ\text{F} \end{smallmatrix}$ | Other |
|-----------------------------|-----------------------|-----------------------|---|-------|
| | | | | |
| | | | | |
| | | | | |
| Meter Nos. | Orion 4780
SN 7846 | Orion 4780
SN 9005 | Orion 4780
SN 7846 | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): well in good condition, no odor, moderate turbidity
Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 5.5 gallon drum

WELL SAMPLING

SAMPLING METHOD @ 14:50

☒ Bailer - Type: 1" x 3" stainless steel

☐ Same As Above

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Grab - Type: _____

☐ Other - Type: _____

SAMPLING DISTRIBUTION

Sample Series: _____

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|------------------------|---------------------|--------------------|---------------|------------|----------|
| <u>MK-SB-10-021191</u> | <u>2.40m Yoda's</u> | <u>8240</u> | <u>HCL</u> | <u>ATI</u> | |
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QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
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Blank Samples

| Type | Sample No. |
|------|------------|
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| | |

Other Samples

| Type | Sample No. |
|------|------------|
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MCK0002856



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name mission - Santa F. Springs
Job Number 17333, 166-11
Recorded by Tom Harder
(Signature)

Well No. mk-SB-13
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date 2-11-91 Time 11:10
Sampled by TH & DS check 2/12/91 R. H. L.
(Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC): 62.49
Water Level Depth (WL in feet BTOC): 46.53
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type: _____
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____
☐ Other - Type: _____

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC)
from _____ to _____

PURGE VOLUME CALCULATION:

$$\left(\frac{62.49}{\text{TD (feet)}} - \frac{46.53}{\text{WL (feet)}} \right) \times \frac{4}{\text{D (inches)}}^2 \times \frac{4}{\text{\# Vols}} \times 0.0408 = \frac{41.67}{\text{Calculated Purge Volume}} \text{ gallons}$$

PURGE TIME

11:17 Start 11:23 Stop _____ Elapsed _____

PURGE RATE

Initial 7.5 gpm Final 7.5 gpm ~ 42 gallons

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (umhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|-----------------------------|------|------------------|---|----------------|
| 0 | 7.11 | 1784 | 23.8 | murky brn |
| 2 | 7.05 | 1707 | 23.3 | slightly murky |
| 4 | 7.05 | 1695 | 23.3 | slightly murky |
| 6 | 7.08 | 1689 | 23.5 | slightly murky |

| Minutes Since Pumping Began | pH | Cond. (umhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|-----------------------------|-------------------------------|------------------|---|-------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Meter Nos. | Hydax S/N 9005 orien S/N 7846 | | | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): slightly murky, no odor, slight sheen
Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: 1" x 3' Stainless Steel

☐ Same As Above

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Grab - Type: _____

☐ Other - Type: _____

SAMPLING DISTRIBUTION

Sample Series: _____

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|------------------------|-----------------------|--------------------|---------------|------------|----------|
| <u>mk-SB-13-021191</u> | <u>2 x 40ml vials</u> | <u>8240</u> | <u>HCL</u> | <u>ATI</u> | |
| | <u>1- 4oz/poly</u> | <u>150.1 (pH)</u> | <u>Unpres</u> | | |
| | | | | | |
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QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
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| | |

Blank Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

Other Samples

| Type | Sample No. |
|------|------------|
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| | |
| | |

MCK0002857



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name Mckesson Santa Fe Springs

Job Number 17333, 166d1

Recorded by [Signature]

Well No. MK-SB-17

Well Type: ☒ Monitor ☐ Extraction ☐ Other

Well Material: ☒ PVC ☐ St. Steel ☐ Other

Date 2-13-91 Time 12:50

Sampled by TH / D.J. 2/15/91

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):

☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other

Total Depth of Casing (TD in feet BTOC): 64.09

Water Level Depth (WL in feet BTOC): 48.57

Number of Well Volumes to be purged (# Vols)

☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE VOLUME CALCULATION:

$$\left(\frac{64.09 - 48.57}{1} \right) \times \frac{4^2}{4} \times 0.0408 = 40.5 \text{ gallons}$$

TD (feet) WL (feet) D (inches) # Vols Calculated Purge Volume

PURGE METHOD

☐ Bailer - Type:

☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:

☐ Other - Type:

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other

Depth in feet (BTOC): Screen Interval in Feet (BTOC)
from to

PURGE TIME

Start 13:07 Stop 13:17 Elapsed 10 min

PURGE RATE

Initial 6.5 gpm Final 6.5 gpm ≈ 75 gallons

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T °C / °F | Other |
|-----------------------------|------|------------------|-----------|----------------------|
| 0.5 | 7.02 | 1739 | 24.4 | Naturally clear |
| 4 | 6.96 | 1702 | 24.2 | 26 gpm |
| 5 | 6.95 | 1701 | 23.9 | W.C. 49.14 (solimex) |
| 8 | 6.96 | 1696 | 23.9 | clear |
| 9 | 6.96 | 1695 | 23.7 | slight odor |
| | | | | W.C. 49.2 |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T °C / °F | Other |
|-----------------------------|------------------|------------------|-----------|----------|
| 10 | 6.96 | 1698 | 23.8 | N. clear |
| 11 | Stopped pumping! | | | |
| | | | | |
| | | | | |
| Meter Nos. | S/N 7846 | S/N 9005 | S/N 7846 | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): well is in good condition, low turbidity, slight odor

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 5.5 gallon drum

WELL SAMPLING

SAMPLING METHOD Q14.10

☒ Bailer - Type: 1" x 3' Stainless Steel

☐ Same As Above

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:

☐ Grab - Type:

☐ Other - Type:

SAMPLING DISTRIBUTION

Sample Series:

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|-----------------|--------------|--------------------|--------------------------------|-----|----------------|
| MK-SB-17-021391 | 2x40ml/VOA | 8240 | HCL | ATI | |
| " | 4oz / Poly | 150.1 (pH) | unpres | " | |
| " | 4oz / Poly | NO ₃ | H ₂ SO ₄ | " | |
| " | 1L / Poly | Gen minerals | unpres | " | |
| " | 16oz / poly | Metals | HNO ₃ | " | Field Filtered |

QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| | |
| | |
| | |

Blank Samples

| Type | Sample No. |
|-----------|------------------|
| Equipment | MK-SB-17-021391E |
| | |
| | |

Other Samples

| Type | Sample No. |
|------|------------|
| | MCK0002858 |
| | |
| | |

**Harding Lawson Associates**Engineering and
Environmental Services**GROUND-WATER SAMPLING FORM**Job Name McKesson Santa Fe SpringsJob Number 17333, 166.11Recorded by Tom Harder
(Signature)Well No. MK-SB-17AWell Type: ☒ Monitor ☐ Extraction ☐ OtherWell Material: ☒ PVC ☒ St. Steel ☐ OtherDate 2-12-91 TimeSampled by TH/DJ BC 2/15/91
(Initials)**WELL PURGING****PURGE VOLUME**

Casing Diameter (D in inches):

☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ OtherTotal Depth of Casing (TD in feet BTOC): 64.97 116.19Water Level Depth (WL in feet BTOC): 49.85

Number of Well Volumes to be purged (# Vols)

☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other**PURGE VOLUME CALCULATION:**

$$\left(\frac{116.19}{\text{TD (feet)}} - \frac{49.85}{\text{WL (feet)}} \right) \times \frac{4}{\text{D (inches)}}^2 \times \frac{4}{\text{\# Vols}} \times 0.0408 = \underline{173.23} \text{ gallons}$$

Calculated Purge Volume

PURGE TIME10:26 Start 11:07 Stop 41 Elapsed**PURGE RATE**Initial 7.5 gpm Final 7.5 gpm**ACTUAL PURGE VOLUME**TH 3075 gallons
BC 420**FIELD PARAMETER MEASUREMENT**

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|-----------------------------|------|------------------|---|----------------|
| 0 | 5.52 | 1733 | 21.4 | murky |
| 3 | 6.95 | 1993 | 21.6 | " |
| 5 | 7.04 | 2030 | 21.7 | slightly murky |
| 8 | 7.07 | 2070 | 21.7 | " |
| 12 | 7.07 | 2050 | 21.5 | clear |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|-----------------------------|-----------------|------------------|---|----------------|
| 16 | 7.08 | 2060 | 21.6 | clear w/ 52.95 |
| 19 | 7.11 | 2060 | 21.9 | " |
| 25 | 7.11 | 2080 | 22.3 | " |
| 41 | Stopped pumping | | | |
| Meter Nos. | SN 7846 | SN 9005 | SN 7846 | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): Well condition is good, no turbidity, no odorDischarge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other Roll-off bin**WELL SAMPLING****SAMPLING METHOD** 13:05☒ Bailer - Type: 1" x 3' Stainless Steel☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:

41 - 57 minutes = an additional 112.5 gallons were purged as an additional test in which pH conductivity and temperature were not monitored.

☐ Same As Above ☐ Grab - Type: ☐ Other - Type:

SAMPLING DISTRIBUTION

Sample Series:

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|------------------|--------------|--------------------|--------------------------------|-----|----------------|
| MK-SB-17A-021291 | 2x40ml/VOA | 8240 | HCL | ATI | |
| " | 40z/poly | 150.1 (pH) | Unpres | " | |
| " | 40z/poly | NO ₃ | H ₂ SO ₄ | " | |
| " | 1L/poly | General Minerals | Unpres | " | |
| " | 16oz/poly | Metals | HNO ₃ | " | Field Filtered |

QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| | |
| | |
| | |
| | |

Blank Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

Other Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

MCK0002859



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name McKesson Santa Fe Springs
Job Number 17333, 166.11
Recorded by Tom Harder
(Signature)

Well No. MK-SB-17B
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date 2-12-91 Time 13:40
Sampled by TH/DJ 2/15/91
(Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC): 95.04
Water Level Depth (WL in feet BTOC): 49.76
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type: _____
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____
☐ Other - Type: _____

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC)
from _____ to _____

PURGE VOLUME CALCULATION:

$$\left(\frac{95.04}{\text{TD (feet)}} - \frac{49.76}{\text{WL (feet)}} \right) \times \frac{4^2}{\text{D (inches)}} \times \frac{4}{\text{\# Vols}} \times 0.0408 = \frac{118.2}{\text{Calculated Purge Volume}} \text{ gallons}$$

PURGE TIME

13:55 Start 14:38 Stop 14:38 Elapsed
43 minutes

PURGE RATE

Initial 7.0 gpm Final 2.8 gpm = 120 gallons

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T °C / °F | Other |
|-----------------------------|------|------------------|-----------|-----------|
| 0 | 6.95 | 1615 | 22.6 | mucky |
| 4 | 7.05 | 1413 | 22.4 | " |
| 6 | 7.10 | 1392 | 22.5 | " 2.8 gpm |
| 9 | 7.20 | 1395 | 22.7 | " |
| 13 | 7.21 | 1334 | 22.9 | " 2.8 gpm |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T °C / °F | Other |
|--|------|------------------|-----------|------------------------|
| 17 | 7.23 | 1238 | 22.7 | slightly mucky |
| 25 | - | 1296 | - | " pH meter not working |
| 40 | - | 1300 | - | slightly mucky |
| Meter Nos. <u>57046</u> <u>579005</u> <u>57846</u> | | | | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): Good Condition, slightly turbid, no odor
Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other Relooff bin

WELL SAMPLING

SAMPLING METHOD @ 15:25

☒ Bailer - Type: 1"x3' Stainless Steel

☐ Same As Above

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Grab - Type: _____

☐ Other - Type: _____

SAMPLING DISTRIBUTION

Sample Series: _____

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|-----------------|--------------|--------------------|---------------|-----|----------------|
| MK-SB-17B-02121 | 2x100ml/Na | 8240 | HCL | ATI | |
| " | 4oz/Poly | 150.1 (pH) | unpress | " | |
| " | 4oz/poly | NO3 | H2 SO4 | " | |
| " | 1L/poly | unpres Gamma | unpress | " | |
| " | 16oz/poly | Metals | HNO3 | " | Field Filtered |

QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| MK-SB-17B-02121 | OT |
| | MK-SB-17B-02121B |

Blank Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |

Other Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |

MCK0002860



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name McKesson Santa Fe Springs

Job Number 17353, 166.11

Recorded by Tom Harder
(Signature)

Well No. MK-SB-20

Well Type: ☒ Monitor ☐ Extraction ☐ Other

Well Material: ☒ PVC ☐ St. Steel ☐ Other

Date 2-13-91 Time 8:30

Sampled by TH / DJ
(Initials)

2/15/91
BL

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):

☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other

Total Depth of Casing (TD in feet BTOC): 64.01

Water Level Depth (WL in feet BTOC): 49.40

Number of Well Volumes to be purged (# Vols)

☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type:

☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:

☐ Other - Type:

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other

Depth in feet (BTOC): Screen Interval in Feet (BTOC)
from to

PURGE VOLUME CALCULATION:

$$\left(\frac{64.01}{\text{TD (feet)}} - \frac{49.40}{\text{WL (feet)}} \right) \times \frac{4}{\text{D (inches)}}^2 \times \frac{4}{\text{\# Vols}} \times 0.0408 = \underline{38.15} \text{ gallons}$$

Calculated Purge Volume

PURGE TIME

08:46 Start 08:54 Stop 8 Elapsed

PURGE RATE

Initial 7.0 gpm Final 4.5 gpm

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T $\begin{matrix} \text{°C} \\ \text{°F} \end{matrix}$ | Other |
|-----------------------------|---------|------------------|--|-------------------------|
| 0 | 6.52 | 1507 | 20.5 | mucky |
| 2 | stopped | | | purging to replace drum |
| 3 | 6.87 | 1608 | 21.2 | clear |
| 5 | 6.80 | 1673 | 21.2 | "WL = 49.88" |
| 8 | 6.82 | 1648 | 21.1 | clear |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T $\begin{matrix} \text{°C} \\ \text{°F} \end{matrix}$ | Other |
|-----------------------------|-----------------|------------------|--|-------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Meter Nos. | <u>31N 7846</u> | <u>31N 9005</u> | <u>31N 7846</u> | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): good condition, no turbidity, no odor

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: 1" x 3' Stainless Steel

☐ Same As Above

☐ Grab - Type:

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:

☐ Other - Type:

SAMPLING DISTRIBUTION

Sample Series:

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|------------------------|-----------------------|--------------------|----------------|------------|----------|
| <u>MK-SB-20-021391</u> | <u>2 x 40ml / WSA</u> | <u>824/0</u> | <u>HCL</u> | <u>ATI</u> | |
| " | <u>4oz / Poly</u> | <u>150.1 (pH)</u> | <u>unpress</u> | " | |
| | | | | | |
| | | | | | |
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| | | | | | |

QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| | |
| | |
| | |
| | |

Blank Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

Other Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

MCK0002861



Harding Lawson Associates

Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name McKesson Santa Fe Springs
Job Number 17333, 166.11
Recorded by [Signature]

Well No. MK-SB-23
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date 2-14-91 Time 12:15
Sampled by TH/DJ BC/2/15/91

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):

☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other

Total Depth of Casing (TD in feet BTOC): 65.09

Water Level Depth (WL in feet BTOC): 48.59

Number of Well Volumes to be purged (# Vols)

☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type:

☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:

☐ Other - Type:

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other

Depth in feet (BTOC): Screen Interval in Feet (BTOC)
from to

PURGE VOLUME CALCULATION:

$$\left(\frac{65.09}{\text{TD (feet)}} - \frac{48.59}{\text{WL (feet)}} \right) \times \frac{4}{\text{D (inches)}}^2 \times \frac{4}{\text{\# Vols}} \times 0.0408 = \frac{43.1}{\text{Calculated Purge Volume}} \text{ gallons}$$

PURGE TIME

PURGE RATE

ACTUAL PURGE VOLUME

12:38 Start 12:52 Stop Elapsed Initial 6 gpm Final 6 gpm ~ 55 gallons

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T <input type="checkbox"/> °C <input type="checkbox"/> °F | Other |
|-----------------------------|------|------------------|---|--------------------------|
| 0.5 | 6.85 | 1755 | 23.0 | very cloudy w/ mod. odor |
| 2.5 | 6.88 | 1710 | 23.6 | clear w/ mod. odor |
| 5 | 6.76 | 1730 | 23.9 | clear w/ slight odor |
| 7 | 6.78 | 1760 | 23.6 | clear w/ slight odor |
| 10 | 6.80 | 1780 | 23.6 | clear w/ slight odor |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T <input type="checkbox"/> °C <input type="checkbox"/> °F | Other |
|-----------------------------|---------|------------------|---|-------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Meter Nos. | SN 7846 | SN 9005 | SN 7846 | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): moderate odor

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD

13:25

☒ Bailer - Type: 1" x 3' Stainless Steel

☐ Same As Above

☐ Grab - Type:

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:

☐ Other - Type:

SAMPLING DISTRIBUTION

Sample Series:

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|-----------------|--------------|--------------------|--------------------------------|-----|----------------|
| MK-SB-23-021491 | 240ml/VOL | 8240 | HCL | ATI | |
| " | 4oz / poly | 150.1 (pH) | unpres | " | |
| " | 4oz / poly | NO ₃ | H ₂ SO ₄ | " | |
| " | 15 / poly | Gen Min | unpres | " | |
| " | 16oz / poly | Metals | HNO ₃ | " | Field filtered |

QUALITY CONTROL SAMPLES

Duplicate Samples

Blank Samples

Other Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| TH MK-SB-23-021491B | |
| MK-SB-23-021491 | MK-SB-23-021491D |

| Type | Sample No. |
|-----------|------------------|
| Equipment | MK-SB-23-021491E |
| Travel | MK-SB-23-021491B |

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |

MCK0002862



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name McKesson Santa Fe Springs
Job Number 17333, 166th
Recorded by [Signature]

Well No. MK-SB-23A
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☒ St. Steel ☐ Other
Date 2-14-91 Time
Sampled by TH / DJ 2/15/91

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC): 127.81
Water Level Depth (WL in feet BTOC): 48.12
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type:
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:
☐ Other - Type:

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): Screen Interval in Feet (BTOC)
from to

PURGE VOLUME CALCULATION:

$$\left(\frac{127.81}{\text{TD (feet)}} - \frac{48.12}{\text{WL (feet)}} \right) \times \frac{4}{\text{D (inches)}}^2 \times \frac{4}{\text{\# Vols}} \times 0.0408 = \frac{208.1}{\text{Calculated Purge Volume}} \text{ gallons}$$

PURGE TIME

PURGE RATE

ACTUAL PURGE VOLUME

4:38 Start 9:05 Stop Elapsed Initial 8 gpm Final 8 gpm 220 gallons

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (umhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|-----------------------------|------|------------------|---|-----------------|
| 0 | 5.41 | 2200 | 21.4 | slightly cloudy |
| 3 | 6.66 | 1885 | 20.9 | no odor |
| 5 | 6.83 | 1900 | 21.0 | opaque tan |
| 7 | 6.92 | 1885 | 21.3 | cloudy |
| 10 | 6.94 | 1920 | 21.1 | no odor |

| Minutes Since Pumping Began | pH | Cond. (umhos/cm) | T $\frac{^{\circ}\text{C}}{^{\circ}\text{F}}$ | Other |
|-----------------------------|------|------------------|---|-------|
| 13 | 6.95 | 1930 | 21.3 | clear |
| 15 | 7.03 | 1925 | 21.3 | clear |
| 20 | 7.09 | 1940 | 21.5 | clear |
| 27 | 7.09 | 1920 | 21.5 | clear |

Observations During Purging (Well Condition, Turbidity, Color, Odor): well is in great condition, no odor, high turbidity
Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 Gallon drums

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: 1"x3" Stainless Steel

☐ Same As Above

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:

☐ Grab - Type:

☐ Other - Type:

SAMPLING DISTRIBUTION

Sample Series:

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|-----------------|--------------|--------------------|--------------------------------|-----|----------------|
| MK-SB-23A-02141 | 2x40ml/VOL | 8240 | HCL | ATI | |
| " | 1-4oz/poly | PH (150.1) | Unpres. | " | |
| " | 1-4oz/poly | NO ₃ | H ₂ SO ₄ | " | |
| " | 1-liter/poly | General Minerals | Unpres. | " | |
| " | 1-16oz | metals | HNO ₃ | " | Field Filtered |

QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| | |
| | |
| | |
| | |

Blank Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

Other Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

MCK0002863



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name McKesson Santa Fe Springs
Job Number 17333, 166.11
Recorded by Tom Harden
(Signature)

Well No. MK-SB-23B
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☒ St. Steel ☐ Other
Date 2-14-91 Time Screen
Sampled by TH / DJ (Initials) 2/15/91

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):

☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other

Total Depth of Casing (TD in feet BTOC): 95.26

Water Level Depth (WL in feet BTOC): 47.99

Number of Well Volumes to be purged (# Vols)

☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type:

☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:

☐ Other - Type:

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other

Depth in feet (BTOC): Screen Interval in Feet (BTOC)
from to

PURGE VOLUME CALCULATION:

$$\left(\frac{95.26 - 47.99}{1} \right) \times \frac{4^2}{4} \times 0.0408 = 123.4 \text{ gallons}$$

TD (feet) WL (feet) D (inches) # Vols Calculated Purge Volume

PURGE TIME

11:04 Start 10:58 Stop 11:22 Elapsed

PURGE RATE

Initial 5.75 gpm Final 5.25 gpm 130 gallons

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F | Other |
|-----------------------------|------|------------------|--|-------------------|
| 0 | 6.03 | 1742 | 23.2 | mucky white |
| 3 | 6.27 | 1720 | 22.6 | translucent brown |
| 5 | 6.49 | 1771 | 22.7 | mucky brown |
| 9 | 6.68 | 1778 | 22.6 | mucky 5.25 gpm |
| 12 | 6.80 | 1760 | 23.0 | slightly mucky |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F | Other |
|---|------|------------------|--|----------------|
| 16 | 6.88 | 1769 | 23.0 | slightly mucky |
| Meter Nos. <u>SN 7846</u> <u>SN 9005</u> <u>SN 7846</u> | | | | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): good condition, moderate turbidity, no odor

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: 1" x 3' Stainless Steel

☐ Same As Above

☐ Grab - Type:

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:

☐ Other - Type:

SAMPLING DISTRIBUTION

Sample Series:

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|----------------|--------------|--------------------|--------------------------------|-----|----------------|
| MK-SB-23B021H1 | 2x4oz / VSA | 8240 | HCL | ATI | |
| " | 4oz / poly | 150.1 (pH) | unpres. | " | |
| " | 4oz / poly | NO ₃ | H ₂ SO ₄ | " | |
| " | 1L / poly | Gen. Mm | unpres. | " | |
| " | 16oz / poly | Metals | HNO ₃ | " | Field Filtered |

QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| | |
| | |
| | |

Blank Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |

Other Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |

MCK0002864

**Harding Lawson Associates**Engineering and
Environmental Services**GROUND-WATER SAMPLING FORM**Job Name Mckesson Santa Fe SpringsJob Number 17333, 166.11Recorded by Tom Hardin
(Signature)Well No. MK-SB-25Well Type: ☒ Monitor ☐ Extraction ☐ OtherWell Material: ☒ PVC ☐ St. Steel ☐ OtherDate 2-13-91 Time 10:15Sampled by TH / DJ 2/15/91
(Initials)**WELL PURGING****PURGE VOLUME**

Casing Diameter (D in inches):

☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ OtherTotal Depth of Casing (TD in feet BTOC): 64.15Water Level Depth (WL in feet BTOC): 46.73

Number of Well Volumes to be purged (# Vols)

☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other**PURGE METHOD**☐ Bailor - Type: _____☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____☐ Other - Type: _____**PUMP INTAKE SETTING**☒ Near Bottom ☐ Near Top ☐ OtherDepth in feet (BTOC): _____ Screen Interval in Feet (BTOC)
from _____ to _____**PURGE VOLUME CALCULATION:**
$$\left(\frac{64.15}{\text{TD (feet)}} - \frac{46.73}{\text{WL (feet)}} \right) \times \frac{4}{\text{D (inches)}}^2 \times \frac{4}{\text{\# Vols}} \times 0.0408 = \frac{45.5}{\text{Calculated Purge Volume}} \text{ gallons}$$
PURGE TIME12:38 Start 12:47 Stop 9 Elapsed**PURGE RATE**Initial 6 gpm Final 6 gpm ~55 gallons**ACTUAL PURGE VOLUME****FIELD PARAMETER MEASUREMENT**

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T $\begin{smallmatrix} \text{°C} \\ \text{°F} \end{smallmatrix}$ | Other |
|-----------------------------|------|------------------|--|--------------|
| 0 | 7.08 | 1629 | 22.2 | murky brn |
| 3 | 7.03 | 1634 | 22.7 | clear w/4782 |
| 5 | 7.03 | 1646 | 22.8 | clear |
| 7 | 7.04 | 1665 | 23.0 | clear w/4791 |
| 9 | 7.03 | 1663 | 22.9 | clear |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T $\begin{smallmatrix} \text{°C} \\ \text{°F} \end{smallmatrix}$ | Other |
|-----------------------------|----------|------------------|--|-------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Meter Nos. | S/N 7846 | S/N 9005 | S/N 7846 | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): good condition, no turbidity, no odorDischarge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum**WELL SAMPLING****SAMPLING METHOD**☒ Bailor - Type: 1"x3' Stainless Steel☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____☐ Same As Above☐ Grab - Type: _____☐ Other - Type: _____**SAMPLING DISTRIBUTION**

Sample Series: _____

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|-----------------|--------------|--------------------|---------------|-----|----------|
| MK-SB-25-021391 | 2x 40ml/60A | 8240 | HCL | ATI | |
| | | | | | |
| | | | | | |
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| | | | | | |
| | | | | | |
| | | | | | |

QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| | |
| | |
| | |
| | |

Blank Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

Other Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

MCK0002865



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name McKesson Santa Fe Springs
Job Number 17333, 166.11
Recorded by Tom Harden
(Signature)

Well No. MK-SB-32
Well Type: ☒ Monitor ☐ Extraction ☐ Other _____
Well Material: ☒ PVC ☐ St. Steel ☐ Other _____
Date 2-12-91 Time _____
Sampled by TH / DJ BC 2/15/91
(Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):

☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other _____

Total Depth of Casing (TD in feet BTOC): 39.29

Water Level Depth (WL in feet BTOC): 33.89

Number of Well Volumes to be purged (# Vols)

☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other _____

PURGE VOLUME CALCULATION:

$$\left(\frac{39.29 - 33.89}{\text{TD (feet)}} \right) \times \frac{4}{\text{D (inches)}}^2 \times \frac{4}{\text{\# Vols}} \times 0.0408 = \frac{17}{\text{Calculated Purge Volume}} \text{ gallons}$$

PURGE METHOD

☒ Bailer - Type: _____

☐ Submersible ☐ Centrifuga ☐ Bladder; Pump No.: _____

☐ Other - Type: _____

PUMP INTAKE SETTING

☐ Near Bottom ☐ Near Top ☐ Other _____

Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC) from _____ to _____

PURGE TIME

0755 Start 0801 Stop 6 Elapsed

Initial 1 gpm Final _____ gpm ~6 gallons

PURGE RATE

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T $\begin{matrix} \square \text{ } ^\circ\text{C} \\ \square \text{ } ^\circ\text{F} \end{matrix}$ | Other _____ |
|---------------------------------|------|------------------|--|-------------|
| 0 | 6.56 | 1523 | 21.2 | clear |
| 4 | 6.71 | 1559 | 21.1 | murky brn |
| 6 | 6.74 | 1550 | 21.5 | " |
| well bailed dry after 6 gallons | | | | |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T $\begin{matrix} \square \text{ } ^\circ\text{C} \\ \square \text{ } ^\circ\text{F} \end{matrix}$ | Other _____ |
|---|----|------------------|--|-------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Meter Nos. <u>SN 7846</u> <u>SN 9005</u> <u>SN 7846</u> | | | | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): good condition, murky brown, no odor

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: 1" x 3' Stainless Steel

☐ Same As Above

☐ Grab - Type: _____

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Other - Type: _____

SAMPLING DISTRIBUTION

Sample Series: _____

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|------------------------|---------------------|--------------------|---------------|------------|----------|
| <u>MK-SB-32-021291</u> | <u>2x 40ml vial</u> | <u>8240</u> | <u>HCL</u> | <u>ATI</u> | |
| <u>"</u> | <u>1-40ml/poly</u> | <u>PH 150.1</u> | <u>unpres</u> | <u>"</u> | |
| | | | | | |
| | | | | | |
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| | | | | | |
| | | | | | |
| | | | | | |

QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| | |
| | |
| | |
| | |

Equipment
Blank Samples

| Type | Sample No. |
|-----------------------------|------------------------|
| <u>Equipment</u> | <u>MK-SB-32-021291</u> |
| <u>(2-40ml vials) =></u> | <u>8240</u> |
| | |
| | |

Other Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

MCK0002866



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name Mckesson Santa Fe Springs
Job Number 17333, 16611
Recorded by [Signature]

Well No. MK-SB-36
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date 2-13-91 Time 9:45
Sampled by TH/DJ 2/5/91

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC): 65.08
Water Level Depth (WL in feet BTOC): 45.84
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailor - Type: _____
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____
☐ Other - Type: _____

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC)
from _____ to _____

PURGE VOLUME CALCULATION:

$$\left(\frac{65.08 - 45.84}{\text{TD (feet)}} \right) \times \frac{4}{\text{D (inches)}}^2 \times \frac{4}{\text{\# Vols}} \times 0.0408 = \frac{50.24}{\text{Calculated Purge Volume}} \text{ gallons}$$

PURGE TIME

9:50 Start 9:57 Stop 7 Elapsed

PURGE RATE

Initial 7.5 gpm Final _____ gpm ~54 gallons

ACTUAL PURGE VOLUME

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T \square °C \square °F | Other |
|-----------------------------|------|------------------|-----------------------------|-------------------------------------|
| 0.5 | 7.00 | 1706 | 20.5 | WLC 45.84 |
| 3 | 7.06 | 1708 | 21.4 | slightly opaque brown 100B7 275 gpm |
| 5 | 7.09 | 1696 | 21.5 | WLC 47.93' fairly clear |
| 7 | 7.09 | 1698 | 21.4 | WLC 48.02' clear WLC 48.03' |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T \square °C \square °F | Other |
|-----------------------------|------------|------------------|-----------------------------|----------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Meter Nos. | crion 7946 | Hydrel 9005 | crion | WLC 7946 |

Observations During Purging (Well Condition, Turbidity, Color, Odor): well is in good condition, slight odor, turbidity

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD

☒ Bailor - Type: 1" x 3' Stainless Steel
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Same As Above

☐ Grab - Type: _____

☐ Other - Type: _____

SAMPLING DISTRIBUTION

Sample Series: _____

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|-----------------|--------------|--------------------|---------------|-----|----------|
| MK-SB-36-021391 | 2x40 ml/10A | 8240 | HCL | ATI | |
| " | 4oz / Poly | 150.1 (pH) | Unpres. | " | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

QUALITY CONTROL SAMPLES

Duplicate Samples Q 10110

Blank Samples

Other Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| MK-SB-36-021391 | MK-SB-36-021391D |
| | |
| | |
| | |

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

MCK0002867



Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name McKesson Santa Fe Springs
Job Number 17333, 166.11
Recorded by [Signature]

Well No. MK-SB-37
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date 2-13-91 Time 9:05
Sampled by TH/DJ 2/17/91 BC

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC): 32.09
Water Level Depth (WL in feet BTOC): 31.74
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☒ Bailer - Type: TH
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:
☐ Other - Type:

PUMP INTAKE SETTING

☐ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): Screen Interval in Feet (BTOC)
from to

PURGE VOLUME CALCULATION:

$$\left(\frac{32.09 - 31.74}{0.35} \right) \times \frac{4}{D \text{ (inches)}}^2 \times 0.0408 = 0.91 \text{ gallons}$$

Calculated Purge Volume

PURGE TIME

Start 8:16 Stop 8:17 Elapsed

PURGE RATE

Initial gpm Final gpm

ACTUAL PURGE VOLUME

TH
25.5 gallons

FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T °C / °F | Other |
|-----------------------------|------|------------------|-----------|--|
| 0.5 gallons | 6.56 | 2220 | 18.6 | Very Silty
Dark murky brown
- 6.1.15 Str |
| | | | | |
| | | | | |
| | | | | |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T °C / °F | Other |
|-----------------------------|----|------------------|-----------|-------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): well is in good condition, water very slightly odor

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other 55 gallon drum

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: 1" x 3' Stainless Steel
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:
☐ Other - Type:

☐ Same As Above

☐ Grab - Type:
☐ Other - Type:

SAMPLING DISTRIBUTION

Sample Series:

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|-------------------|-----------------------|--------------------|---------------|---------------|--|
| <u>TH 8216 TH</u> | <u>2.44 L / 4.0 L</u> | <u>TH 8216 TH</u> | <u>HCL TH</u> | <u>ATI TH</u> | <u>Not Sampled due to lack of water in well.</u> |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---------------------|----------------------|
| | |
| | |
| | |
| | |

Blank Samples

| Type | Sample No. |
|-------------------|-------------------------|
| <u>TH 8216 TH</u> | <u>MK-SB-37-021341B</u> |
| | |
| | |
| | |

Other Samples

| Type | Sample No. |
|------|------------|
| | |
| | |
| | |
| | |

MCK0002868

MCK0002869

APPENDIX H
AQUIFER TEST ANALYSIS

MCK0002870

Table H1. Summary of Slug Test Data - Slug in (continued)

| Time From
Start of
Test
(Minutes) | MW-1
•Change
In Water
Level
(feet) | MW-2
•Change
In Water
Level
(feet) | MW-3
•Change
In Water
Level
(feet) | MW-32
•Change
In Water
Level
(feet) |
|--|--|--|--|---|
| Static Water Level | 47.95 | 44.92 | 48.62 | 33.46 |
| Date/Time | 8-16-90/09:30 | 8-16-90/10:50 | 8-15-90/11:41 | 8-16-90/16:00 |
| 1.0833 | 0 | 0.01 | 0.01 | 0.21 |
| 1.1667 | 0 | 0 | 0.01 | 0.21 |
| 1.25 | 0 | 0 | 0.01 | 0.21 |
| 1.3333 | 0 | 0 | 0.01 | 0.21 |
| 1.4166 | 0 | 0 | 0.01 | 0.21 |
| 1.5 | 0 | 0 | 0.01 | 0.2 |
| 1.5833 | 0.01 | 0 | 0.01 | 0.21 |
| 1.6667 | 0.01 | 0 | 0 | 0.21 |
| 1.75 | 0.01 | 0 | 0.01 | 0.2 |
| 1.8333 | 0.01 | 0 | 0.01 | 0.2 |
| 1.9167 | 0.01 | 0 | 0.01 | 0.2 |
| 2 | 0.01 | 0 | 0.01 | 0.2 |
| 2.5 | 0.01 | 0 | 0.01 | 0.19 |
| 3 | 0.01 | 0 | 0.01 | 0.17 |
| 3.5 | 0.01 | 0 | 0 | 0.17 |
| 4 | 0 | 0.01 | 0.01 | 0.17 |
| 4.5 | 0.01 | 0.01 | 0.01 | 0.15 |
| 5 | 0.01 | 0 | 0.01 | 0.15 |
| 5.5 | 0.01 | 0.01 | 0 | 0.14 |
| 6 | 0.01 | 0.01 | 0 | 0.15 |
| 6.5 | 0 | 0.01 | 0.01 | 0.13 |
| 7 | 0 | 0.01 | 0.01 | 0.13 |
| 7.5 | 0 | 0.01 | 0.01 | 0.13 |
| 8 | 0.01 | 0.01 | 0.01 | 0.13 |
| 8.5 | 0 | 0 | 0 | 0.12 |
| 9 | 0 | 0 | 0.01 | 0.12 |
| 9.5 | 0 | 0 | 0.01 | 0.11 |
| 10 | 0 | 0.01 | 0.01 | 0.1 |
| 12 | 0 | ND | 0.01 | 0.1 |
| 14 | 0 | ND | ND | 0.09 |
| 16 | ND | ND | ND | 0.07 |
| 18 | ND | ND | ND | 0.06 |
| 20 | ND | ND | ND | 0.06 |
| 22 | ND | ND | ND | 0.05 |
| 24 | ND | ND | ND | 0.04 |
| 26 | ND | ND | ND | 0.03 |
| 28 | ND | ND | ND | 0.02 |
| 30 | ND | ND | ND | 0.02 |
| 32 | ND | ND | ND | 0.01 |

 • Water level deviation from static as measured with a Hermit Data Logger.
 ND indicates no data available.

MCK0002871

Table H2. Summary of Slug Test Data - Slug Out

| | Time From
Start of
Test
(Minutes) | MW-1
*Change
In Water
Level
(feet) | MW-2
*Change
In Water
Level
(feet) | MW-3
*Change
In Water
Level
(feet) | SB-32
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|--|---|
| Static Water Level | | 47.95 | 44.92 | 48.62 | 32.76 |
| Date Time | | 8-16-90/09:57 | 8-16-90/11:05 | 8-15-90/11:56 | 8-16-90/16:69 |
| | 0 | 0 | 0 | 0 | 1.59 |
| | 0.0033 | 0.01 | 0.11 | 0 | 2.56 |
| | 0.0066 | 0 | 0.49 | 0 | 0.46 |
| | 0.0099 | 0.02 | 0.93 | 0.07 | 1.53 |
| | 0.0133 | 0.32 | 0.49 | 0.45 | 2.17 |
| | 0.0166 | 0.59 | 0.09 | 0.42 | 2.11 |
| | 0.02 | 0.97 | 0.09 | 0.43 | 2.14 |
| | 0.0233 | 1.25 | 0.09 | 1.07 | 1.89 |
| | 0.0266 | 0.97 | 2.16 | 0.41 | 1.95 |
| | 0.03 | 0.1 | 3.74 | 0.34 | 1.97 |
| | 0.0333 | 0.58 | 4.19 | 0.75 | 1.91 |
| | 0.05 | 1.65 | 2.05 | 0.41 | 1.79 |
| | 0.0666 | 2.09 | 2.61 | 0.12 | 1.67 |
| | 0.0833 | 1.46 | 2.13 | 4.26 | 1.56 |
| | 0.1 | 1.04 | 1.77 | 2.32 | 1.47 |
| | 0.1166 | 0.76 | 1.48 | 1.52 | 1.38 |
| | 0.1333 | 0.57 | 1.25 | 1.43 | 1.3 |
| | 0.15 | 0.43 | 1.07 | 1.29 | 1.25 |
| | 0.1666 | 0.33 | 0.9 | 0.63 | 1.19 |
| | 0.1833 | 0.26 | 0.78 | 0.28 | 1.15 |
| | 0.2 | 0.21 | 0.68 | 0.09 | 1.12 |
| | 0.2166 | 0.16 | 0.6 | 0 | 1.09 |
| | 0.2333 | 0.13 | 0.55 | 0.06 | 1.07 |
| | 0.25 | 0.1 | 0.48 | 0.01 | 1.06 |
| | 0.2666 | 0.08 | 0.43 | 0.1 | 1.05 |
| | 0.2833 | 0.07 | 0.39 | 0.07 | 1.04 |
| | 0.3 | 0.06 | 0.35 | 0.06 | 1.02 |
| | 0.3166 | 0.05 | 0.31 | 0.05 | 1.02 |
| | 0.3333 | 0.04 | 0.28 | 0.06 | 1.01 |
| | 0.4167 | 0.02 | 0.15 | 0.03 | 0.99 |
| | 0.5 | 0.01 | 0.08 | 0.01 | 0.98 |
| | 0.5833 | 0.01 | 0.04 | 0.76 | 0.96 |
| | 0.6667 | 0 | 0.02 | 0.13 | 0.96 |
| | 0.75 | 0 | 0.01 | 0.17 | 0.95 |
| | 0.8333 | 0 | 0.01 | 0.01 | 0.94 |
| | 0.9167 | 0 | 0 | 0.01 | 0.94 |
| | 1 | 0 | 0 | 0.01 | 0.93 |

 * Water level deviation from static as measured with a Hermit Data Logger.
 ND indicates no data available.

MCK0002872

Table H2. Summary of Slug Test Data - Slug Out (continued)

| | Time From
Start of
Test
(Minutes) | MW-1
*Change
In Water
Level
(feet) | MW-2
*Change
In Water
Level
(feet) | MW-3
*Change
In Water
Level
(feet) | SB-32
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|--|---|
| Static Water Level | | 47.95 | 44.92 | 48.62 | 32.76 |
| Date/Time | | 8-16-90/09:57 | 8-16-90/11:05 | 8-15-90/11:56 | 8-16-90/16:69 |
| | 1.0833 | 0 | 0.01 | 0.01 | 0.93 |
| | 1.1667 | 0.01 | 0.01 | 0.01 | 0.92 |
| | 1.25 | 0 | 0.01 | 0.01 | 0.92 |
| | 1.3333 | 0.01 | 0.01 | 0.01 | 0.91 |
| | 1.4166 | 0 | 0.01 | 0.01 | 0.91 |
| | 1.5 | 0 | 0.01 | 0.01 | 0.91 |
| | 1.5833 | 0 | 0.01 | 0.01 | 0.91 |
| | 1.6667 | 0 | 0.01 | 0.01 | 0.9 |
| | 1.75 | 0 | 0.02 | 0.01 | 0.9 |
| | 1.8333 | 0 | 0.02 | 0.01 | 0.9 |
| | 1.9167 | 0 | 0.02 | 0.01 | 0.9 |
| | 2 | 0 | 0.02 | 0.01 | 0.9 |
| | 2.5 | 0 | 0.02 | 0.01 | 0.89 |
| | 3 | 0.01 | 0.02 | 0.01 | 0.89 |
| | 3.5 | 0.01 | 0.02 | 0.01 | 0.88 |
| | 4 | 0.01 | 0.02 | 0.01 | 0.87 |
| | 4.5 | 0.01 | 0.02 | 0.01 | 0.86 |
| | 5 | 0.01 | 0.01 | 0.01 | 0.85 |
| | 5.5 | 0.01 | 0.02 | 0.01 | 0.85 |
| | 6 | 0.01 | 0.02 | 0.01 | 0.85 |
| | 6.5 | 0.01 | 0.03 | 0.01 | 0.85 |
| | 7 | 0.01 | 0.02 | 0.01 | 0.85 |
| | 7.5 | 0.01 | 0.02 | 0.01 | 0.85 |
| | 8 | 0.01 | 0.02 | 0.01 | 0.84 |
| | 8.5 | 0.01 | 0.03 | 0.01 | 0.84 |
| | 9 | 0.01 | 0.03 | 0 | 0.84 |
| | 9.5 | 0.01 | 0.02 | 0.01 | 0.84 |
| | 10 | 0.01 | 0.02 | 0.01 | 0.84 |
| | 12 | 0.01 | 0.02 | 0.01 | 0.84 |
| | 14 | 0.01 | ND | 0.01 | 0.83 |
| | 16 | ND | ND | ND | 0.83 |
| | 18 | ND | ND | ND | 0.82 |
| | 20 | ND | ND | ND | 0.8 |
| | 22 | ND | ND | ND | 0.81 |
| | 24 | ND | ND | ND | 0.81 |
| | 26 | ND | ND | ND | 0.8 |
| | 28 | ND | ND | ND | 0.81 |
| | 30 | ND | ND | ND | 0.8 |
| | 32 | ND | ND | ND | 0.8 |
| | 34 | ND | ND | ND | 0.78 |
| | 36 | ND | ND | ND | 0.78 |
| | 38 | ND | ND | ND | 0.79 |
| | 40 | ND | ND | ND | 0.78 |

 * Water level deviation from static as measured with a Hermit Data Logger.
 ND indicates no data available.

MCK0002873

Table H3. Summary of SB-23 Pump Test Data
Pumping SB-23A

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 48.46 | 48.46 |
| Date/Time | | 2-14-91/12:30 | 2-14-91/12:52 |
| | 0 | 0 | 0 |
| | 0.0033 | 0 | 0 |
| | 0.0066 | 0 | 0 |
| | 0.0099 | 0 | 0 |
| | 0.0133 | 0 | 0 |
| | 0.0166 | 0 | 0 |
| | 0.02 | 0 | 0 |
| | 0.0233 | 0 | 0 |
| | 0.0266 | 0 | 0 |
| | 0.03 | 0 | 0 |
| | 0.0333 | 0 | 0 |
| | 0.05 | 0 | 0 |
| | 0.0666 | 0 | 0 |
| | 0.0833 | 0 | 0 |
| | 0.1 | 0 | 0 |
| | 0.1166 | 0 | 0 |
| | 0.1333 | 0 | 0 |
| | 0.15 | 0 | 0 |
| | 0.1666 | 0 | 0 |
| | 0.1833 | 0 | 0 |
| | 0.2 | 0 | 0 |
| | 0.2166 | 0 | 0 |
| | 0.2333 | 0 | 0 |
| | 0.25 | 0 | 0 |
| | 0.2666 | 0 | 0 |
| | 0.2833 | 0 | 0 |
| | 0.3 | 0 | 0 |
| | 0.3166 | 0 | 0 |
| | 0.3333 | 0 | 0 |
| | 0.4167 | 0 | 0 |
| | 0.5 | 0 | 0 |
| | 0.5833 | 0 | 0 |
| | 0.6667 | 0 | 0 |
| | 0.75 | 0 | 0 |
| | 0.8333 | 0 | 0 |
| | 0.9167 | 0 | 0 |
| | 1 | 0 | 0 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002874

Table H3. Summary of SB-23 Pump Test Data (continued)
Pumping SB-23A

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 48.46 | 48.46 |
| Date/Time | | 2-14-91/12:30 | 2-14-91/12:52 |
| | 1.0833 | 0 | 0 |
| | 1.1667 | 0 | 0 |
| | 1.25 | 0 | 0 |
| | 1.3333 | 0 | 0 |
| | 1.4166 | 0 | 0 |
| | 1.5 | 0 | 0 |
| | 1.5833 | 0 | 0 |
| | 1.6667 | 0 | 0 |
| | 1.75 | 0 | 0 |
| | 1.8333 | 0 | 0 |
| | 1.9167 | 0 | 0 |
| | 2 | 0 | 0 |
| | 2.5 | 0 | 0 |
| | 3 | 0 | 0 |
| | 3.5 | 0 | 0 |
| | 4 | 0 | 0 |
| | 4.5 | 0 | 0 |
| | 5 | 0 | 0 |
| | 5.5 | 0 | 0 |
| | 6 | 0 | 0 |
| | 6.5 | 0 | 0 |
| | 7 | 0 | 0 |
| | 7.5 | 0 | 0 |
| | 8 | 0 | 0 |
| | 8.5 | 0 | 0 |
| | 9 | 0 | 0 |
| | 9.5 | 0 | 0 |
| | 10 | 0 | 0 |
| | 11 | 0 | 0 |
| | 12 | 0 | 0 |
| | 13 | 0 | 0 |
| | 14 | 0 | 0 |
| | 15 | 0 | 0 |
| | 16 | 0 | 0 |
| | 17 | 0 | 0 |
| | 18 | 0 | 0 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002875

Table H4. Summary of SB-23A Pump Test Data
Pumping SB-23A

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 48.08 | 48.08 |
| Date/Time | | 2-14-91/12:30 | 2-14-91/12:52 |
| | 0 | 0 | 1.24 |
| | 0.0033 | 0.14 | 1.48 |
| | 0.0066 | 0.74 | 1.55 |
| | 0.0099 | 0.86 | 1.61 |
| | 0.0133 | 0.5 | 1.58 |
| | 0.0166 | 0.26 | 1.59 |
| | 0.02 | 0.28 | 1.57 |
| | 0.0233 | 0.32 | 1.55 |
| | 0.0266 | 0.37 | 1.51 |
| | 0.03 | 0.39 | 1.46 |
| | 0.0333 | 0.7 | 1.42 |
| | 0.05 | 0.92 | 1.24 |
| | 0.0666 | 1.14 | 1.08 |
| | 0.0833 | 1.24 | 0.95 |
| | 0.1 | 1.42 | 0.83 |
| | 0.1166 | 1.52 | 0.73 |
| | 0.1333 | 1.6 | 0.65 |
| | 0.15 | 1.75 | 0.58 |
| | 0.1666 | 1.63 | 0.51 |
| | 0.1833 | 1.68 | 0.46 |
| | 0.2 | 1.68 | 0.41 |
| | 0.2166 | 1.69 | 0.37 |
| | 0.2333 | 1.61 | 0.33 |
| | 0.25 | 1.67 | 0.3 |
| | 0.2666 | 1.65 | 0.27 |
| | 0.2833 | 1.64 | 0.25 |
| | 0.3 | 1.58 | 0.23 |
| | 0.3166 | 1.6 | 0.21 |
| | 0.3333 | 1.68 | 0.19 |
| | 0.4167 | 1.67 | 0.16 |
| | 0.5 | 1.61 | 0.12 |
| | 0.5833 | 1.66 | 0.1 |
| | 0.6667 | 1.64 | 0.09 |
| | 0.75 | 1.68 | 0.08 |
| | 0.8333 | 1.67 | 0.07 |
| | 0.9167 | 1.65 | 0.07 |
| | 1 | 1.68 | 0.07 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002876

Table H4. Summary of SB-23A Pump Test Data (continued)
Pumping SB-23A

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 48.08 | 48.08 |
| Date/Time | | 2-14-91/12:30 | 2-14-91/12:52 |
| | 1.0833 | 1.72 | 0.06 |
| | 1.1667 | 1.68 | 0.05 |
| | 1.25 | 1.7 | 0.05 |
| | 1.3333 | 1.72 | 0.05 |
| | 1.4166 | 1.71 | 0.05 |
| | 1.5 | 1.75 | 0.05 |
| | 1.5833 | 1.72 | 0.05 |
| | 1.6667 | 1.76 | 0.05 |
| | 1.75 | 1.72 | 0.04 |
| | 1.8333 | 1.7 | 0.04 |
| | 1.9167 | 1.71 | 0.04 |
| | 2 | 1.73 | 0.04 |
| | 2.5 | 1.73 | 0.04 |
| | 3 | 1.75 | 0.04 |
| | 3.5 | 1.71 | 0.02 |
| | 4 | 1.76 | 0.02 |
| | 4.5 | 1.76 | 0.02 |
| | 5 | 1.77 | 0.02 |
| | 5.5 | 1.77 | 0.02 |
| | 6 | 1.82 | 0.01 |
| | 6.5 | 1.82 | 0.01 |
| | 7 | 1.84 | 0.01 |
| | 7.5 | 1.86 | 0.01 |
| | 8 | 1.78 | 0.01 |
| | 8.5 | 1.8 | 0 |
| | 9 | 1.85 | 0 |
| | 9.5 | 1.83 | 0 |
| | 10 | 1.85 | 0 |
| | 11 | 1.81 | 0 |
| | 12 | 1.78 | 0 |
| | 13 | 1.83 | 0 |
| | 14 | 1.83 | 0 |
| | 15 | 1.83 | 0 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002877

Table H3. Summary of SB-23 Pump Test Data
Pumping SB-23A

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 48.46 | 48.46 |
| Date/Time | | 2-14-91/12:30 | 2-14-91/12:52 |
| | 0 | 0 | 0 |
| | 0.0033 | 0 | 0 |
| | 0.0066 | 0 | 0 |
| | 0.0099 | 0 | 0 |
| | 0.0133 | 0 | 0 |
| | 0.0166 | 0 | 0 |
| | 0.02 | 0 | 0 |
| | 0.0233 | 0 | 0 |
| | 0.0266 | 0 | 0 |
| | 0.03 | 0 | 0 |
| | 0.0333 | 0 | 0 |
| | 0.05 | 0 | 0 |
| | 0.0666 | 0 | 0 |
| | 0.0833 | 0 | 0 |
| | 0.1 | 0 | 0 |
| | 0.1166 | 0 | 0 |
| | 0.1333 | 0 | 0 |
| | 0.15 | 0 | 0 |
| | 0.1666 | 0 | 0 |
| | 0.1833 | 0 | 0 |
| | 0.2 | 0 | 0 |
| | 0.2166 | 0 | 0 |
| | 0.2333 | 0 | 0 |
| | 0.25 | 0 | 0 |
| | 0.2666 | 0 | 0 |
| | 0.2833 | 0 | 0 |
| | 0.3 | 0 | 0 |
| | 0.3166 | 0 | 0 |
| | 0.3333 | 0 | 0 |
| | 0.4167 | 0 | 0 |
| | 0.5 | 0 | 0 |
| | 0.5833 | 0 | 0 |
| | 0.6667 | 0 | 0 |
| | 0.75 | 0 | 0 |
| | 0.8333 | 0 | 0 |
| | 0.9167 | 0 | 0 |
| | 1 | 0 | 0 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002878

Table H3. Summary of SB-23 Pump Test Data (continued)
Pumping SB-23A

| Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--|--|--|
| Static Water Level | 48.46 | 48.46 |
| Date/Time | 2-14-91/12:30 | 2-14-91/12:52 |
| 1.0833 | 0 | 0 |
| 1.1667 | 0 | 0 |
| 1.25 | 0 | 0 |
| 1.3333 | 0 | 0 |
| 1.4166 | 0 | 0 |
| 1.5 | 0 | 0 |
| 1.5833 | 0 | 0 |
| 1.6667 | 0 | 0 |
| 1.75 | 0 | 0 |
| 1.8333 | 0 | 0 |
| 1.9167 | 0 | 0 |
| 2 | 0 | 0 |
| 2.5 | 0 | 0 |
| 3 | 0 | 0 |
| 3.5 | 0 | 0 |
| 4 | 0 | 0 |
| 4.5 | 0 | 0 |
| 5 | 0 | 0 |
| 5.5 | 0 | 0 |
| 6 | 0 | 0 |
| 6.5 | 0 | 0 |
| 7 | 0 | 0 |
| 7.5 | 0 | 0 |
| 8 | 0 | 0 |
| 8.5 | 0 | 0 |
| 9 | 0 | 0 |
| 9.5 | 0 | 0 |
| 10 | 0 | 0 |
| 11 | 0 | 0 |
| 12 | 0 | 0 |
| 13 | 0 | 0 |
| 14 | 0 | 0 |
| 15 | 0 | 0 |
| 16 | 0 | 0 |
| 17 | 0 | 0 |
| 18 | 0 | 0 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002879

Table H4. Summary of SB-23A Pump Test Data (continued)
Pumping SB-23A

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 48.08 | 48.08 |
| Date/Time | | 2-14-91/12:30 | 2-14-91/12:52 |
| | 1.0833 | 1.72 | 0.06 |
| | 1.1667 | 1.68 | 0.05 |
| | 1.25 | 1.7 | 0.05 |
| | 1.3333 | 1.72 | 0.05 |
| | 1.4166 | 1.71 | 0.05 |
| | 1.5 | 1.75 | 0.05 |
| | 1.5833 | 1.72 | 0.05 |
| | 1.6667 | 1.76 | 0.05 |
| | 1.75 | 1.72 | 0.04 |
| | 1.8333 | 1.7 | 0.04 |
| | 1.9167 | 1.71 | 0.04 |
| | 2 | 1.73 | 0.04 |
| | 2.5 | 1.73 | 0.04 |
| | 3 | 1.75 | 0.04 |
| | 3.5 | 1.71 | 0.02 |
| | 4 | 1.76 | 0.02 |
| | 4.5 | 1.76 | 0.02 |
| | 5 | 1.77 | 0.02 |
| | 5.5 | 1.77 | 0.02 |
| | 6 | 1.82 | 0.01 |
| | 6.5 | 1.82 | 0.01 |
| | 7 | 1.84 | 0.01 |
| | 7.5 | 1.86 | 0.01 |
| | 8 | 1.78 | 0.01 |
| | 8.5 | 1.8 | 0 |
| | 9 | 1.85 | 0 |
| | 9.5 | 1.83 | 0 |
| | 10 | 1.85 | 0 |
| | 11 | 1.81 | 0 |
| | 12 | 1.78 | 0 |
| | 13 | 1.83 | 0 |
| | 14 | 1.83 | 0 |
| | 15 | 1.83 | 0 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002880

MCK0002881

Table H5. Summary of SB-23B Pump Test Data
Pumping SB-23A

| | Time From
Start of
Test
(Minutes) | PUMP OUT
**Change
In Water
Level
(feet) | RECOVERY
**Change
In Water
Level
(feet) |
|--------------------|--|---|---|
| Static Water Level | | 48.12 | 48.12 |
| Date/Time | | 2-14-91/12:30 | 2-14-91/12:52 |
| | 0 | 0 | 0.04 |
| | 0.0033 | 0 | 0.05 |
| | 0.0066 | 0 | 0.05 |
| | 0.0099 | 0 | 0.05 |
| | 0.0133 | 0 | 0.05 |
| | 0.0166 | 0 | 0.05 |
| | 0.02 | 0 | 0.05 |
| | 0.0233 | 0 | 0.04 |
| | 0.0266 | 0.01 | 0.05 |
| | 0.03 | 0 | 0.04 |
| | 0.0333 | 0 | 0.05 |
| | 0.05 | 0.01 | 0.05 |
| | 0.0666 | 0.01 | 0.04 |
| | 0.0833 | 0.01 | 0.04 |
| | 0.1 | 0.01 | 0.04 |
| | 0.1166 | 0.01 | 0.05 |
| | 0.1333 | 0.01 | 0.04 |
| | 0.15 | 0.01 | 0.05 |
| | 0.1666 | 0.01 | 0.04 |
| | 0.1833 | 0.01 | 0.05 |
| | 0.2 | 0.01 | 0.04 |
| | 0.2166 | 0.01 | 0.05 |
| | 0.2333 | 0.02 | 0.04 |
| | 0.25 | 0.02 | 0.04 |
| | 0.2666 | 0.02 | 0.04 |
| | 0.2833 | 0.02 | 0.05 |
| | 0.3 | 0.02 | 0.04 |
| | 0.3166 | 0.02 | 0.05 |
| | 0.3333 | 0.01 | 0.04 |
| | 0.4167 | 0.02 | 0.04 |
| | 0.5 | 0.01 | 0.04 |
| | 0.5833 | 0.01 | 0.04 |
| | 0.6667 | 0.01 | 0.04 |
| | 0.75 | 0.01 | 0.04 |
| | 0.8333 | 0.01 | 0.04 |
| | 0.9167 | 0.01 | 0.04 |
| | 1 | 0.01 | 0.05 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002882

Table H5. Summary of SB-23B Pump Test Data (continued)
Pumping SB-23A

| | Time From
Start of
Test
(Minutes) | PUMP OUT
**Change
In Water
Level
(feet) | RECOVERY
**Change
In Water
Level
(feet) |
|--------------------|--|---|---|
| Static Water Level | | 48.12 | 48.12 |
| Date Time | | 2-14-91/12:30 | 2-14-91/12:52 |
| | 1.3333 | 0.01 | 0.04 |
| | 1.4166 | 0.01 | 0.04 |
| | 1.5 | 0.01 | 0.04 |
| | 1.5833 | 0.01 | 0.04 |
| | 1.6667 | 0.01 | 0.04 |
| | 1.75 | 0.01 | 0.04 |
| | 1.8333 | 0.01 | 0.04 |
| | 1.9167 | 0.01 | 0.04 |
| | 2 | 0.01 | 0.04 |
| | 2.5 | 0.01 | 0.04 |
| | 3 | 0 | 0.04 |
| | 3.5 | 0 | 0.04 |
| | 4 | 0 | 0.04 |
| | 4.5 | 0 | 0.04 |
| | 5 | 0.01 | 0.03 |
| | 5.5 | 0.01 | 0.03 |
| | 6 | 0.01 | 0.03 |
| | 6.5 | 0.01 | 0.03 |
| | 7 | 0.01 | 0.03 |
| | 7.5 | 0.02 | 0.02 |
| | 8 | 0.02 | 0.02 |
| | 8.5 | 0.02 | 0.02 |
| | 9 | 0.03 | 0.02 |
| | 9.5 | 0.03 | 0.02 |
| | 10 | 0.03 | 0.02 |
| | 11 | 0.04 | 0.01 |
| | 12 | 0.04 | 0.01 |
| | 13 | 0.04 | 0.01 |
| | 14 | 0.04 | 0.01 |
| | 15 | 0.05 | 0 |
| | 16 | 0.04 | 0 |
| | 17 | 0.05 | 0 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002883

Table H6. Summary of SB-23 Pump Test Data
Pumping SB-23B

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 48.52 | 48.52 |
| Date/Time | | 2-14-91/10:42 | 2-14-91/11:04 |
| | 0 | 0 | 0.01 |
| | 0.0033 | 0 | 0.01 |
| | 0.0066 | 0 | 0.01 |
| | 0.0099 | 0 | 0.01 |
| | 0.0133 | 0 | 0.01 |
| | 0.0166 | 0 | 0.01 |
| | 0.02 | 0 | 0.01 |
| | 0.0233 | 0 | 0.01 |
| | 0.0266 | 0 | 0.01 |
| | 0.03 | 0 | 0.01 |
| | 0.0333 | 0 | 0.01 |
| | 0.05 | 0 | 0.01 |
| | 0.0666 | 0 | 0.01 |
| | 0.0833 | 0 | 0.01 |
| | 0.1 | 0 | 0.01 |
| | 0.1166 | 0 | 0.01 |
| | 0.1333 | 0 | 0.01 |
| | 0.15 | 0 | 0.01 |
| | 0.1666 | 0 | 0.01 |
| | 0.1833 | 0 | 0.01 |
| | 0.2 | 0 | 0.01 |
| | 0.2166 | 0 | 0.01 |
| | 0.2333 | 0 | 0.01 |
| | 0.25 | 0 | 0.01 |
| | 0.2666 | 0 | 0.01 |
| | 0.2833 | 0 | 0.01 |
| | 0.3 | 0 | 0.01 |
| | 0.3166 | 0 | 0.01 |
| | 0.3333 | 0 | 0.01 |
| | 0.4167 | 0 | 0.01 |
| | 0.5 | 0 | 0.01 |
| | 0.5833 | 0 | 0.01 |
| | 0.6667 | 0 | 0.01 |
| | 0.75 | 0 | 0.01 |
| | 0.8333 | 0 | 0.01 |
| | 0.9167 | 0 | 0.01 |
| | 1 | 0 | 0.01 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002884

Table H6. Summary of SB-23 Pump Test Data (continued)
Pumping SB-23B

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 48.52 | 48.52 |
| Date/Time | | 2-14-91/10:42 | 2-14-91/11:04 |
| | 1.0833 | 0 | 0.01 |
| | 1.1667 | 0 | 0.01 |
| | 1.25 | 0 | 0.01 |
| | 1.3333 | 0 | 0.01 |
| | 1.4166 | 0 | 0.01 |
| | 1.5 | 0 | 0.01 |
| | 1.5833 | 0 | 0.01 |
| | 1.6667 | 0 | 0.01 |
| | 1.75 | 0 | 0.01 |
| | 1.8333 | 0 | 0.01 |
| | 1.9167 | 0 | 0.01 |
| | 2 | 0 | 0.01 |
| | 2.5 | 0 | 0.01 |
| | 3 | 0 | 0.01 |
| | 3.5 | 0 | 0.01 |
| | 4 | 0 | 0.01 |
| | 4.5 | 0 | 0.01 |
| | 5 | 0 | 0.01 |
| | 5.5 | 0 | 0.01 |
| | 6 | 0 | 0.01 |
| | 6.5 | 0 | 0.01 |
| | 7 | 0 | 0.01 |
| | 7.5 | 0 | 0.01 |
| | 8 | 0 | 0.01 |
| | 8.5 | 0 | 0.01 |
| | 9 | 0 | 0.01 |
| | 9.5 | 0 | 0.01 |
| | 10 | 0.01 | 0.01 |
| | 11 | 0.01 | 0.01 |
| | 12 | 0.01 | 0.01 |
| | 13 | 0.01 | 0.01 |
| | 14 | 0.01 | 0.01 |
| | 15 | 0.01 | 0.01 |
| | 16 | 0.01 | 0.01 |
| | 17 | 0.01 | 0.01 |
| | 18 | 0.01 | - |
| | 19 | 0.01 | - |

* Water level deviation from static as measured with a Hermit Data Logger.
- No data available.

MCK0002885

Table H7. Summary of SB-23A Pump Test Data
Pumping SB-23B

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 48.13 | 48.13 |
| Date/Time | | 2-14-91/10:42 | 2-14-91/11:04 |
| | 0 | 0 | 0.09 |
| | 0.0033 | 0 | 0.09 |
| | 0.0066 | 0 | 0.09 |
| | 0.0099 | 0.01 | 0.09 |
| | 0.0133 | 0 | 0.09 |
| | 0.0166 | 0 | 0.09 |
| | 0.02 | 0.01 | 0.09 |
| | 0.0233 | 0 | 0.09 |
| | 0.0266 | 0 | 0.09 |
| | 0.03 | 0 | 0.09 |
| | 0.0333 | 0.01 | 0.09 |
| | 0.05 | 0 | 0.09 |
| | 0.0666 | 0 | 0.09 |
| | 0.0833 | 0 | 0.09 |
| | 0.1 | 0 | 0.09 |
| | 0.1166 | 0.01 | 0.09 |
| | 0.1333 | 0 | 0.09 |
| | 0.15 | 0.01 | 0.09 |
| | 0.1666 | 0 | 0.09 |
| | 0.1833 | 0 | 0.09 |
| | 0.2 | 0 | 0.09 |
| | 0.2166 | 0 | 0.09 |
| | 0.2333 | 0 | 0.09 |
| | 0.25 | 0 | 0.09 |
| | 0.2666 | 0 | 0.09 |
| | 0.2833 | 0 | 0.09 |
| | 0.3 | 0.01 | 0.09 |
| | 0.3166 | 0.01 | 0.09 |
| | 0.3333 | 0.01 | 0.09 |
| | 0.4167 | 0.01 | 0.09 |
| | 0.5 | 0.01 | 0.08 |
| | 0.5833 | 0.01 | 0.08 |
| | 0.6667 | 0.02 | 0.07 |
| | 0.75 | 0.02 | 0.07 |
| | 0.8333 | 0.02 | 0.07 |
| | 0.9167 | 0.03 | 0.07 |
| | 1 | 0.03 | 0.07 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002886

Table H7. Summary of SB-23A Pump Test Data (continued)
Pumping SB-23B

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 48.13 | 48.13 |
| Date/Time | | 2-14-91/10:42 | 2-14-91/11:04 |
| | 1.0833 | 0.03 | 0.06 |
| | 1.1667 | 0.03 | 0.06 |
| | 1.25 | 0.04 | 0.06 |
| | 1.3333 | 0.04 | 0.06 |
| | 1.4166 | 0.04 | 0.06 |
| | 1.5 | 0.05 | 0.05 |
| | 1.5833 | 0.04 | 0.05 |
| | 1.6667 | 0.05 | 0.05 |
| | 1.75 | 0.05 | 0.05 |
| | 1.8333 | 0.06 | 0.04 |
| | 1.9167 | 0.05 | 0.04 |
| | 2 | 0.06 | 0.04 |
| | 2.5 | 0.06 | 0.03 |
| | 3 | 0.08 | 0.02 |
| | 3.5 | 0.08 | 0.02 |
| | 4 | 0.08 | 0.01 |
| | 4.5 | 0.09 | 0.01 |
| | 5 | 0.09 | 0.01 |
| | 5.5 | 0.09 | 0.01 |
| | 6 | 0.09 | 0.01 |
| | 6.5 | 0.09 | 0.01 |
| | 7 | 0.09 | 0.01 |
| | 7.5 | 0.1 | 0.01 |
| | 8 | 0.1 | 0.01 |
| | 8.5 | 0.11 | 0 |
| | 9 | 0.11 | 0 |
| | 9.5 | 0.11 | 0 |
| | 10 | 0.11 | 0 |
| | 11 | 0.11 | 0 |
| | 12 | 0.11 | 0 |
| | 13 | 0.11 | 0 |
| | 14 | 0.11 | 0 |
| | 15 | 0.12 | 0 |
| | 16 | 0.12 | 0 |
| | 17 | 0.13 | 0 |
| | 18 | 0.13 | 0 |
| | 19 | 0.13 | 0 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002887

Table H8. Summary of SB-23B Pump Test Data
Pumping SB-23B

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 47.81 | 47.81 |
| Date/Time | | 2-14-91/10:42 | 2-14-91/11:04 |
| | 0 | 0 | 10.39 |
| | 0.0033 | 0.01 | 10.99 |
| | 0.0066 | 0.13 | 10.88 |
| | 0.0099 | 0.11 | 10.82 |
| | 0.0133 | 0.09 | 10.77 |
| | 0.0166 | 0.18 | 10.75 |
| | 0.02 | 0.28 | 10.72 |
| | 0.0233 | 0.36 | 10.68 |
| | 0.0266 | 0.42 | 10.63 |
| | 0.03 | 0.5 | 10.6 |
| | 0.0333 | 0.58 | 10.56 |
| | 0.05 | 0.9 | 10.39 |
| | 0.0666 | 1.15 | 10.22 |
| | 0.0833 | 1.43 | 10.06 |
| | 0.1 | 1.69 | 9.89 |
| | 0.1166 | 1.89 | 9.73 |
| | 0.1333 | 2.12 | 9.57 |
| | 0.15 | 2.31 | 9.42 |
| | 0.1666 | 2.5 | 9.27 |
| | 0.1833 | 2.69 | 9.12 |
| | 0.2 | 2.79 | 8.97 |
| | 0.2166 | 2.87 | 8.82 |
| | 0.2333 | 2.99 | 8.68 |
| | 0.25 | 3.15 | 8.53 |
| | 0.2666 | 3.29 | 8.39 |
| | 0.2833 | 3.41 | 8.25 |
| | 0.3 | 3.5 | 8.12 |
| | 0.3166 | 3.57 | 7.98 |
| | 0.3333 | 3.73 | 7.85 |
| | 0.4167 | 4.33 | 7.21 |
| | 0.5 | 4.76 | 6.62 |
| | 0.5833 | 5.23 | 6.08 |
| | 0.6667 | 5.7 | 5.57 |
| | 0.75 | 6.1 | 5.1 |
| | 0.8333 | 6.48 | 4.67 |
| | 0.9167 | 6.84 | 4.27 |
| | 1 | 7.17 | 3.9 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002888

Table H8. Summary of SB-23B Pump Test Data (continued)
Pumping SB-23B

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 47.81 | 47.81 |
| Date/Time | | 2-14-91/10:42 | 2-14-91/11:04 |
| | 1.0833 | 7.45 | 3.56 |
| | 1.1667 | 7.7 | 3.26 |
| | 1.25 | 7.92 | 2.97 |
| | 1.3333 | 8.15 | 2.71 |
| | 1.4166 | 8.33 | 2.47 |
| | 1.5 | 8.57 | 2.25 |
| | 1.5833 | 8.78 | 2.07 |
| | 1.6667 | 8.89 | 1.87 |
| | 1.75 | 9.03 | 1.73 |
| | 1.8333 | 9.18 | 1.57 |
| | 1.9167 | 9.23 | 1.43 |
| | 2 | 9.36 | 1.3 |
| | 2.5 | 9.89 | 0.74 |
| | 3 | 10.13 | 0.43 |
| | 3.5 | 10.48 | 0.26 |
| | 4 | 10.6 | 0.16 |
| | 4.5 | 10.68 | 0.11 |
| | 5 | 10.77 | 0.08 |
| | 5.5 | 10.77 | 0.07 |
| | 6 | 10.76 | 0.05 |
| | 6.5 | 10.81 | 0.05 |
| | 7 | 10.84 | 0.04 |
| | 7.5 | 10.85 | 0.04 |
| | 8 | 10.87 | 0.04 |
| | 8.5 | 10.87 | 0.03 |
| | 9 | 10.92 | 0.03 |
| | 9.5 | 10.93 | 0.03 |
| | 10 | 10.94 | 0.03 |
| | 11 | 10.87 | 0.02 |
| | 12 | 10.79 | 0.02 |
| | 13 | 10.79 | 0.02 |
| | 14 | 10.8 | 0.02 |
| | 15 | 10.85 | 0.01 |
| | 16 | 10.95 | 0.01 |
| | 17 | 10.97 | 0.01 |
| | 18 | 11.03 | - |
| | 19 | 11 | - |

* Water level deviation from static as measured with a Hermit Data Logger.

- No data available.

MCK0002889

Table H9. Summary of SB-23 Pump Test Data
Pumping SB-23

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 48.46 | 48.46 |
| Date/Time | | 2-14-91/12:38 | 2-14-91/12:52 |
| | 0 | 0 | 1.44 |
| | 0.0033 | 0.26 | 1.29 |
| | 0.0066 | 0.23 | 1.25 |
| | 0.0099 | 0.11 | 1.28 |
| | 0.0133 | 0.03 | 1.26 |
| | 0.0166 | 0 | 1.22 |
| | 0.02 | 0.03 | 1.19 |
| | 0.0233 | 0.07 | 1.18 |
| | 0.0266 | 0.13 | 1.17 |
| | 0.03 | 0.16 | 1.14 |
| | 0.0333 | 0.18 | 1.12 |
| | 0.05 | 0.34 | 1.04 |
| | 0.0666 | 0.45 | 0.98 |
| | 0.0833 | 0.51 | 0.92 |
| | 0.1 | 0.56 | 0.87 |
| | 0.1166 | 0.59 | 0.83 |
| | 0.1333 | 0.62 | 0.8 |
| | 0.15 | 0.64 | 0.77 |
| | 0.1666 | 0.66 | 0.74 |
| | 0.1833 | 0.68 | 0.71 |
| | 0.2 | 0.62 | 0.68 |
| | 0.2166 | 0.58 | 0.65 |
| | 0.2333 | 0.56 | 0.63 |
| | 0.25 | 0.55 | 0.61 |
| | 0.2666 | 0.55 | 0.58 |
| | 0.2833 | 0.54 | 0.56 |
| | 0.3 | 0.55 | 0.54 |
| | 0.3166 | 0.55 | 0.52 |
| | 0.3333 | 0.55 | 0.5 |
| | 0.4167 | 0.59 | 0.42 |
| | 0.5 | 0.63 | 0.36 |
| | 0.5833 | 0.65 | 0.31 |
| | 0.6667 | 0.67 | 0.28 |
| | 0.75 | 0.68 | 0.24 |
| | 0.8333 | 0.71 | 0.22 |
| | 0.9167 | 0.73 | 0.2 |
| | 1 | 0.73 | 0.18 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002890

Table H9. Summary of SB-23 Pump Test Data (continued)
Pumping SB-23

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 48.46 | 48.46 |
| Date/Time | | 2-14-91/12:38 | 2-14-91/12:52 |
| | 1.0833 | 0.74 | 0.17 |
| | 1.1667 | 0.74 | 0.16 |
| | 1.25 | 0.78 | 0.15 |
| | 1.3333 | 0.91 | 0.14 |
| | 1.4166 | 0.88 | 0.13 |
| | 1.5 | 0.85 | 0.13 |
| | 1.5833 | 0.85 | 0.12 |
| | 1.6667 | 0.85 | 0.11 |
| | 1.75 | 0.85 | 0.11 |
| | 1.8333 | 0.86 | 0.11 |
| | 1.9167 | 0.86 | 0.11 |
| | 2 | 0.85 | 0.1 |
| | 2.5 | 0.87 | 0.09 |
| | 3 | 0.89 | 0.08 |
| | 3.5 | 0.92 | 0.07 |
| | 4 | 0.94 | 0.07 |
| | 4.5 | 0.94 | 0.06 |
| | 5 | 0.98 | 0.06 |
| | 5.5 | 0.97 | 0.05 |
| | 6 | 0.98 | 0.05 |
| | 6.5 | 0.99 | 0.05 |
| | 7 | 1 | 0.05 |
| | 7.5 | 1 | 0.04 |
| | 8 | 1.01 | 0.04 |
| | 8.5 | 1.01 | 0.04 |
| | 9 | 1.03 | 0.03 |
| | 9.5 | 1.05 | 0.03 |
| | 10 | 1.06 | 0.03 |
| | 11 | 1.07 | 0.03 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002891

Table H10. Summary of SB-23A Pump Test Data
Pumping SB-23

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 48.46 | 48.46 |
| Date/Time | | 2-14-91/12:38 | 2-14-91/12:52 |
| | 0 | 0 | 0.02 |
| | 0.0033 | 0 | 0.02 |
| | 0.0066 | 0 | 0.02 |
| | 0.0099 | 0 | 0.02 |
| | 0.0133 | 0 | 0.02 |
| | 0.0166 | 0 | 0.02 |
| | 0.02 | 0 | 0.02 |
| | 0.0233 | 0 | 0.02 |
| | 0.0266 | 0 | 0.02 |
| | 0.03 | 0 | 0.02 |
| | 0.0333 | 0 | 0.02 |
| | 0.05 | 0 | 0.02 |
| | 0.0666 | 0 | 0.02 |
| | 0.0833 | 0 | 0.02 |
| | 0.1 | 0 | 0.02 |
| | 0.1166 | 0 | 0.02 |
| | 0.1333 | 0 | 0.02 |
| | 0.15 | 0 | 0.02 |
| | 0.1666 | 0 | 0.02 |
| | 0.1833 | 0 | 0.02 |
| | 0.2 | 0 | 0.02 |
| | 0.2166 | 0 | 0.02 |
| | 0.2333 | 0 | 0.02 |
| | 0.25 | 0 | 0.02 |
| | 0.2666 | 0 | 0.02 |
| | 0.2833 | 0 | 0.02 |
| | 0.3 | 0 | 0.02 |
| | 0.3166 | 0 | 0.02 |
| | 0.3333 | 0 | 0.02 |
| | 0.4167 | 0 | 0.02 |
| | 0.5 | 0 | 0.02 |
| | 0.5833 | 0 | 0.02 |
| | 0.6667 | 0 | 0.02 |
| | 0.75 | 0 | 0.02 |
| | 0.8333 | 0 | 0.02 |
| | 0.9167 | 0 | 0.02 |
| | 1 | 0 | 0.02 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002892

Table H10. Summary of SB-23A Pump Test Data (continued)
Pumping SB-23

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 48.08 | 48.08 |
| Date/Time | | 2-14-91/12:38 | 2-14-91/12:52 |
| | 1.0833 | 0 | 0.02 |
| | 1.1667 | 0 | 0.02 |
| | 1.25 | 0 | 0.02 |
| | 1.3333 | 0 | 0.02 |
| | 1.4166 | 0 | 0.02 |
| | 1.5 | 0.01 | 0.02 |
| | 1.5833 | 0.01 | 0.02 |
| | 1.6667 | 0 | 0.02 |
| | 1.75 | 0.01 | 0.02 |
| | 1.8333 | 0 | 0.02 |
| | 1.9167 | 0.01 | 0.02 |
| | 2 | 0 | 0.02 |
| | 2.5 | 0.01 | 0.02 |
| | 3 | 0.01 | 0.02 |
| | 3.5 | 0.01 | 0.02 |
| | 4 | 0.01 | 0.02 |
| | 4.5 | 0.01 | 0.02 |
| | 5 | 0.01 | 0.02 |
| | 5.5 | 0.01 | 0.02 |
| | 6 | 0.01 | 0.02 |
| | 6.5 | 0.01 | 0.02 |
| | 7 | 0.01 | 0.02 |
| | 7.5 | 0.01 | 0.02 |
| | 8 | 0.01 | 0.01 |
| | 8.5 | 0.01 | 0.01 |
| | 9 | 0.02 | 0.01 |
| | 9.5 | 0.02 | 0.01 |
| | 10 | 0.02 | 0.01 |
| | 11 | 0.02 | 0.01 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002893

Table H11. Summary of SB-23B Pump Test Data
Pumping SB-23

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 48.12 | 48.12 |
| Date/Time | | 2-14-91/12:38 | 2-14-91/12:52 |
| | 0 | 0 | 0.01 |
| | 0.0033 | 0 | 0.01 |
| | 0.0066 | 0 | 0.01 |
| | 0.0099 | 0 | 0.01 |
| | 0.0133 | 0 | 0.01 |
| | 0.0166 | 0 | 0.01 |
| | 0.02 | 0 | 0.01 |
| | 0.0233 | 0 | 0.01 |
| | 0.0266 | 0 | 0.01 |
| | 0.03 | 0 | 0.01 |
| | 0.0333 | 0 | 0.01 |
| | 0.05 | 0 | 0.01 |
| | 0.0666 | 0 | 0.01 |
| | 0.0833 | 0 | 0.01 |
| | 0.1 | 0 | 0.01 |
| | 0.1166 | 0 | 0.01 |
| | 0.1333 | 0 | 0.01 |
| | 0.15 | 0 | 0.01 |
| | 0.1666 | 0 | 0.01 |
| | 0.1833 | 0 | 0.01 |
| | 0.2 | 0 | 0.01 |
| | 0.2166 | 0 | 0.01 |
| | 0.2333 | 0 | 0.01 |
| | 0.25 | 0 | 0.01 |
| | 0.2666 | 0 | 0.01 |
| | 0.2833 | 0 | 0.01 |
| | 0.3 | 0 | 0.01 |
| | 0.3166 | 0 | 0.01 |
| | 0.3333 | 0 | 0.01 |
| | 0.4167 | 0.01 | 0.01 |
| | 0.5 | 0.01 | 0.01 |
| | 0.5833 | 0.01 | 0.01 |
| | 0.6667 | 0.01 | 0.01 |
| | 0.75 | 0.01 | 0.01 |
| | 0.8333 | 0.01 | 0.01 |
| | 0.9167 | 0.01 | 0.01 |
| | 1 | 0.01 | 0.01 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002894

Table H11. Summary of SB-23B Pump Test Data (continued)
Pumping SB-23

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 48.12 | 48.12 |
| Date/Time | | 2-14-91/12:38 | 2-14-91/12:52 |
| | 1.0833 | 0.01 | 0.01 |
| | 1.1667 | 0.01 | 0.01 |
| | 1.25 | 0.01 | 0.01 |
| | 1.3333 | 0.01 | 0.01 |
| | 1.4166 | 0.01 | 0.01 |
| | 1.5 | 0.01 | 0.01 |
| | 1.5833 | 0.01 | 0.01 |
| | 1.6667 | 0.01 | 0.01 |
| | 1.75 | 0.01 | 0.01 |
| | 1.8333 | 0.01 | 0.01 |
| | 1.9167 | 0.01 | 0.01 |
| | 2 | 0.01 | 0.01 |
| | 2.5 | 0.01 | 0.01 |
| | 3 | 0.01 | 0.02 |
| | 3.5 | 0.01 | 0.02 |
| | 4 | 0.01 | 0.02 |
| | 4.5 | 0.01 | 0.02 |
| | 5 | 0.01 | 0.02 |
| | 5.5 | 0.01 | 0.02 |
| | 6 | 0.01 | 0.02 |
| | 6.5 | 0.01 | 0.02 |
| | 7 | 0.01 | 0.02 |
| | 7.5 | 0.01 | 0.01 |
| | 8 | 0.01 | 0.02 |
| | 8.5 | 0.01 | 0.01 |
| | 9 | 0.01 | 0.01 |
| | 9.5 | 0.01 | 0.01 |
| | 10 | 0.01 | 0.01 |
| | 11 | 0.02 | 0.01 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002895

Table H12. Summary of SB-17 Pump Test Data
Pumping SB-17A

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 48.54 | 48.54 |
| Date/Time | | 2-12-91/11:58 | 2-12-91/12:18 |
| | 0 | 0 | 0.01 |
| | 0.0033 | 0 | 0.01 |
| | 0.0066 | 0 | 0.01 |
| | 0.0099 | 0 | 0.01 |
| | 0.0133 | 0 | 0.01 |
| | 0.0166 | 0 | 0.01 |
| | 0.02 | 0 | 0.01 |
| | 0.0233 | 0 | 0.01 |
| | 0.0266 | 0 | 0.01 |
| | 0.03 | 0 | 0.01 |
| | 0.0333 | 0 | 0.01 |
| | 0.05 | 0 | 0.01 |
| | 0.0666 | 0 | 0.01 |
| | 0.0833 | 0 | 0.01 |
| | 0.1 | 0 | 0.01 |
| | 0.1166 | 0 | 0.01 |
| | 0.1333 | 0 | 0.01 |
| | 0.15 | 0 | 0.01 |
| | 0.1666 | 0 | 0.01 |
| | 0.1833 | 0 | 0.01 |
| | 0.2 | 0 | 0.01 |
| | 0.2166 | 0 | 0.01 |
| | 0.2333 | 0 | 0.01 |
| | 0.25 | 0 | 0.01 |
| | 0.2666 | 0 | 0.01 |
| | 0.2833 | 0 | 0.01 |
| | 0.3 | 0 | 0.01 |
| | 0.3166 | 0 | 0.01 |
| | 0.3333 | 0 | 0.01 |
| | 0.4167 | 0 | 0.01 |
| | 0.5 | 0 | 0.01 |
| | 0.5833 | 0 | 0.01 |
| | 0.6667 | 0 | 0.01 |
| | 0.75 | 0 | 0.01 |
| | 0.8333 | 0 | 0.01 |
| | 0.9167 | 0 | 0.01 |
| | 1 | 0 | 0.01 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002896

Table H12. Summary of SB-17 Pump Test Data (continued)
Pumping SB-17A

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 48.54 | 48.54 |
| Date/Time | | 2-12-91/11:58 | 2-12-91/12:18 |
| | 1.0833 | 0 | 0.01 |
| | 1.1667 | 0 | 0.01 |
| | 1.25 | 0 | 0.01 |
| | 1.3333 | 0 | 0.01 |
| | 1.4166 | 0 | 0.01 |
| | 1.5 | 0 | 0.01 |
| | 1.5833 | 0 | 0.01 |
| | 1.6667 | 0 | 0.01 |
| | 1.75 | 0 | 0.01 |
| | 1.8333 | 0 | 0.01 |
| | 1.9167 | 0 | 0.01 |
| | 2 | 0 | 0.01 |
| | 2.5 | 0 | 0.01 |
| | 3 | 0 | 0.01 |
| | 3.5 | 0 | 0.01 |
| | 4 | 0 | 0.01 |
| | 4.5 | 0 | 0.01 |
| | 5 | 0 | 0.01 |
| | 5.5 | 0 | 0.01 |
| | 6 | 0 | 0.01 |
| | 6.5 | 0 | 0.01 |
| | 7 | 0 | 0.01 |
| | 7.5 | 0 | 0.01 |
| | 8 | 0 | 0.01 |
| | 8.5 | 0 | 0.01 |
| | 9 | 0 | 0.01 |
| | 9.5 | 0 | 0.01 |
| | 10 | 0 | 0.01 |
| | 11 | 0 | 0.01 |
| | 12 | 0 | 0.01 |
| | 13 | 0 | 0.01 |
| | 14 | 0 | 0.01 |
| | 15 | 0 | 0.01 |
| | 16 | 0 | 0.01 |
| | 17 | 0 | 0.01 |
| | 18 | 0 | 0.01 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002897

Table H13. Summary of SB-17A Pump Test Data
Pumping SB-17A

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 49.90 | 49.90 |
| Date/Time | | 2-12-91/11:58 | 2-12-91/12:18 |
| | 0 | 0 | 0.77 |
| | 0.0033 | 0.19 | 0.8 |
| | 0.0066 | 0.16 | 0.77 |
| | 0.0099 | 0 | 0.74 |
| | 0.0133 | 0.08 | 0.73 |
| | 0.0166 | 0.05 | 0.71 |
| | 0.02 | 0.11 | 0.67 |
| | 0.0233 | 0.11 | 0.64 |
| | 0.0266 | 0.18 | 0.61 |
| | 0.03 | 0.24 | 0.58 |
| | 0.0333 | 0.27 | 0.55 |
| | 0.05 | 0.45 | 0.44 |
| | 0.0666 | 0.55 | 0.35 |
| | 0.0833 | 0.69 | 0.28 |
| | 0.1 | 0.74 | 0.23 |
| | 0.1166 | 0.83 | 0.18 |
| | 0.1333 | 0.77 | 0.15 |
| | 0.15 | 0.85 | 0.13 |
| | 0.1666 | 0.76 | 0.11 |
| | 0.1833 | 0.75 | 0.1 |
| | 0.2 | 0.73 | 0.09 |
| | 0.2166 | 0.76 | 0.08 |
| | 0.2333 | 0.72 | 0.07 |
| | 0.25 | 0.73 | 0.06 |
| | 0.2666 | 0.76 | 0.06 |
| | 0.2833 | 0.69 | 0.06 |
| | 0.3 | 0.71 | 0.05 |
| | 0.3166 | 0.69 | 0.05 |
| | 0.3333 | 0.76 | 0.05 |
| | 0.4167 | 0.67 | 0.05 |
| | 0.5 | 0.67 | 0.04 |
| | 0.5833 | 0.65 | 0.03 |
| | 0.6667 | 0.69 | 0.03 |
| | 0.75 | 0.63 | 0.03 |
| | 0.8333 | 0.67 | 0.02 |
| | 0.9167 | 0.67 | 0.02 |
| | 1 | 0.66 | 0.02 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002898

Table H13. Summary of SB-17A Pump Test Data (continued)
Pumping SB-17A

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 49.90 | 49.90 |
| Date/Time | | 2-12-91/11:58 | 2-12-91/12:18 |
| | 1.0833 | 0.67 | 0.01 |
| | 1.1667 | 0.66 | 0.01 |
| | 1.25 | 0.67 | 0.01 |
| | 1.3333 | 0.72 | 0.01 |
| | 1.4166 | 0.7 | 0.01 |
| | 1.5 | 0.71 | 0.01 |
| | 1.5833 | 0.69 | 0.01 |
| | 1.6667 | 0.7 | 0.01 |
| | 1.75 | 0.67 | 0.01 |
| | 1.8333 | 0.71 | 0.01 |
| | 1.9167 | 0.69 | 0 |
| | 2 | 0.67 | 0 |
| | 2.5 | 0.68 | 0 |
| | 3 | 0.69 | 0 |
| | 3.5 | 0.71 | 0 |
| | 4 | 0.7 | - |
| | 4.5 | 0.69 | - |
| | 5 | 0.73 | - |
| | 5.5 | 0.75 | - |
| | 6 | 0.73 | - |
| | 6.5 | 0.74 | - |
| | 7 | 0.72 | - |
| | 7.5 | 0.71 | - |
| | 8 | 0.66 | - |
| | 8.5 | 0.72 | - |
| | 9 | 0.71 | - |
| | 9.5 | 0.67 | - |
| | 10 | 0.73 | - |
| | 11 | 0.76 | - |
| | 12 | 0.73 | - |
| | 13 | 0.72 | - |
| | 14 | 0.74 | - |
| | 15 | 0.69 | - |
| | 16 | 0.74 | - |

* Water level deviation from static as measured with a Hermit Data Logger.
- No data available.

MCK0002899

Table H14. Summary of SB-17B Pump Test Data
Pumping SB-17A

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 49.83 | 49.83 |
| Date/Time | | 2-12-91/11:58 | 2-12-91/12:18 |
| | 0 | 0 | 0.02 |
| | 0.0033 | 0 | 0.03 |
| | 0.0066 | 0 | 0.03 |
| | 0.0099 | 0 | 0.03 |
| | 0.0133 | 0 | 0.02 |
| | 0.0166 | 0 | 0.02 |
| | 0.02 | 0 | 0.02 |
| | 0.0233 | 0 | 0.02 |
| | 0.0266 | 0 | 0.03 |
| | 0.03 | 0 | 0.03 |
| | 0.0333 | 0 | 0.03 |
| | 0.05 | 0.01 | 0.03 |
| | 0.0666 | 0.01 | 0.02 |
| | 0.0833 | 0.01 | 0.02 |
| | 0.1 | 0.01 | 0.02 |
| | 0.1166 | 0.01 | 0.03 |
| | 0.1333 | 0.01 | 0.02 |
| | 0.15 | 0.01 | 0.03 |
| | 0.1666 | 0.01 | 0.02 |
| | 0.1833 | 0.01 | 0.02 |
| | 0.2 | 0.01 | 0.02 |
| | 0.2166 | 0.01 | 0.03 |
| | 0.2333 | 0.02 | 0.03 |
| | 0.25 | 0.02 | 0.03 |
| | 0.2666 | 0.02 | 0.04 |
| | 0.2833 | 0.02 | 0.04 |
| | 0.3 | 0.02 | 0.04 |
| | 0.3166 | 0.02 | 0.05 |
| | 0.3333 | 0.01 | 0.04 |
| | 0.4167 | 0.02 | 0.04 |
| | 0.5 | 0.01 | 0.04 |
| | 0.5833 | 0.01 | 0.04 |
| | 0.6667 | 0.01 | 0.04 |
| | 0.75 | 0.01 | 0.04 |
| | 0.8333 | 0.01 | 0.04 |
| | 0.9167 | 0.01 | 0.04 |
| | 1 | 0.01 | 0.03 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002900

Table H14. Summary of SB-17B Pump Test Data (continued)
Pumping SB-17A

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 49.83 | 49.83 |
| Date/Time | | 2-12-91/11:58 | 2-12-91/12:18 |
| | 1.0833 | 0.01 | 0.03 |
| | 1.1667 | 0.01 | 0.02 |
| | 1.25 | 0.01 | 0.02 |
| | 1.3333 | 0.01 | 0.02 |
| | 1.4166 | 0.01 | 0.02 |
| | 1.5 | 0.01 | 0.02 |
| | 1.5833 | 0.01 | 0.02 |
| | 1.6667 | 0.01 | 0.02 |
| | 1.75 | 0.01 | 0.02 |
| | 1.8333 | 0.01 | 0.02 |
| | 1.9167 | 0.01 | 0.02 |
| | 2 | 0.01 | 0.02 |
| | 2.5 | 0.01 | 0.02 |
| | 3 | 0 | 0.02 |
| | 3.5 | 0 | 0.02 |
| | 4 | 0 | 0.02 |
| | 4.5 | 0.01 | 0.02 |
| | 5 | 0.01 | 0.02 |
| | 5.5 | 0.01 | 0.02 |
| | 6 | 0.01 | 0.01 |
| | 6.5 | 0.01 | 0.01 |
| | 7 | 0.01 | 0.01 |
| | 7.5 | 0.02 | 0.01 |
| | 8 | 0.02 | 0.01 |
| | 8.5 | 0.02 | 0.01 |
| | 9 | 0.03 | 0.01 |
| | 9.5 | 0.03 | 0.01 |
| | 10 | 0.03 | 0.01 |
| | 11 | 0.04 | 0.01 |
| | 12 | 0.04 | 0 |
| | 13 | 0.04 | 0 |
| | 14 | 0.04 | 0.01 |
| | 15 | 0.05 | 0.01 |
| | 16 | 0.05 | 0.01 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002901

Table H15. Summary of SB-17 Pump Test Data
Pumping SB-17B

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 48.61 | 48.61 |
| Date/Time | | 2-12-91/10:32 | 2-12-91/11:12 |
| | 0 | 0 | 0.01 |
| | 0.0033 | 0 | 0.01 |
| | 0.0066 | 0 | 0.01 |
| | 0.0099 | 0 | 0.01 |
| | 0.0133 | 0 | 0.01 |
| | 0.0166 | 0 | 0.01 |
| | 0.02 | 0 | 0.01 |
| | 0.0233 | 0 | 0.01 |
| | 0.0266 | 0 | 0.01 |
| | 0.03 | 0 | 0.01 |
| | 0.0333 | 0 | 0.01 |
| | 0.05 | 0 | 0.01 |
| | 0.0666 | 0 | 0.01 |
| | 0.0833 | 0 | 0.01 |
| | 0.1 | 0 | 0.01 |
| | 0.1166 | 0 | 0.01 |
| | 0.1333 | 0 | 0.01 |
| | 0.15 | 0 | 0.01 |
| | 0.1666 | 0 | 0.01 |
| | 0.1833 | 0 | 0.01 |
| | 0.2 | 0 | 0.01 |
| | 0.2166 | 0 | 0.01 |
| | 0.2333 | 0 | 0.01 |
| | 0.25 | 0 | 0.01 |
| | 0.2666 | 0 | 0.01 |
| | 0.2833 | 0 | 0.01 |
| | 0.3 | 0 | 0.01 |
| | 0.3166 | 0 | 0.01 |
| | 0.3333 | 0 | 0.01 |
| | 0.4167 | 0 | 0.01 |
| | 0.5 | 0 | 0.01 |
| | 0.5833 | 0 | 0.01 |
| | 0.6667 | 0 | 0.01 |
| | 0.75 | 0 | 0.01 |
| | 0.8333 | 0 | 0.01 |
| | 0.9167 | 0 | 0.01 |
| | 1 | 0 | 0.01 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002902

Table H15. Summary of SB-17 Pump Test Data (continued)
Pumping SB-17B

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 48.61 | 48.61 |
| Date/Time | | 2-12-91/10:32 | 2-12-91/11:12 |
| | 1.0833 | 0 | 0.01 |
| | 1.1667 | 0 | 0.01 |
| | 1.25 | 0 | 0.01 |
| | 1.3333 | 0 | 0.01 |
| | 1.4166 | 0 | 0.01 |
| | 1.5 | 0 | 0.01 |
| | 1.5833 | 0 | 0.01 |
| | 1.6667 | 0 | 0.01 |
| | 1.75 | 0 | 0.01 |
| | 1.8333 | 0 | 0.01 |
| | 1.9167 | 0 | 0.01 |
| | 2 | 0 | 0.01 |
| | 2.5 | 0 | 0.01 |
| | 3 | 0 | 0.01 |
| | 3.5 | 0 | 0.01 |
| | 4 | 0 | 0.01 |
| | 4.5 | 0 | 0.01 |
| | 5 | 0 | 0.01 |
| | 5.5 | 0 | 0.01 |
| | 6 | 0 | 0.01 |
| | 6.5 | 0 | 0.01 |
| | 7 | 0 | 0.01 |
| | 7.5 | 0 | 0.01 |
| | 8 | 0 | 0.01 |
| | 8.5 | 0 | 0.01 |
| | 9 | 0 | 0.01 |
| | 9.5 | 0 | 0.01 |
| | 10 | 0.01 | 0.01 |
| | 11 | 0.01 | 0.01 |
| | 12 | 0.01 | 0.01 |
| | 13 | 0.01 | 0.01 |
| | 14 | 0.01 | 0.01 |
| | 15 | 0.01 | 0.01 |
| | 16 | 0.01 | 0.01 |
| | 17 | 0.01 | 0.01 |
| | 18 | 0.01 | 0.01 |
| | 19 | 0.01 | 0.01 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002903

Table H16. Summary of SB-17A Pump Test Data
Pumping SB-17B

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 49.94 | 49.94 |
| Date/Time | | 2-12-91/10:32 | 2-12-91/11:12 |
| | 0 | 0 | 0.09 |
| | 0.0033 | 0 | 0.09 |
| | 0.0066 | 0 | 0.09 |
| | 0.0099 | 0.01 | 0.09 |
| | 0.0133 | 0 | 0.09 |
| | 0.0166 | 0 | 0.09 |
| | 0.02 | 0.01 | 0.09 |
| | 0.0233 | 0 | 0.09 |
| | 0.0266 | 0 | 0.09 |
| | 0.03 | 0 | 0.09 |
| | 0.0333 | 0.01 | 0.09 |
| | 0.05 | 0 | 0.09 |
| | 0.0666 | 0 | 0.09 |
| | 0.0833 | 0 | 0.09 |
| | 0.1 | 0 | 0.09 |
| | 0.1166 | 0.01 | 0.09 |
| | 0.1333 | 0 | 0.09 |
| | 0.15 | 0.01 | 0.09 |
| | 0.1666 | 0 | 0.09 |
| | 0.1833 | 0 | 0.09 |
| | 0.2 | 0 | 0.09 |
| | 0.2166 | 0 | 0.09 |
| | 0.2333 | 0 | 0.09 |
| | 0.25 | 0 | 0.09 |
| | 0.2666 | 0 | 0.09 |
| | 0.2833 | 0 | 0.09 |
| | 0.3 | 0.01 | 0.09 |
| | 0.3166 | 0.01 | 0.09 |
| | 0.3333 | 0.01 | 0.09 |
| | 0.4167 | 0.01 | 0.09 |
| | 0.5 | 0.01 | 0.08 |
| | 0.5833 | 0.01 | 0.08 |
| | 0.6667 | 0.02 | 0.07 |
| | 0.75 | 0.02 | 0.07 |
| | 0.8333 | 0.02 | 0.07 |
| | 0.9167 | 0.03 | 0.07 |
| | 1 | 0.03 | 0.07 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002904

Table H16. Summary of SB-17A Pump Test Data (continued)
Pumping SB-17B

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 49.94 | 49.94 |
| Date/Time | | 2-12-91/10:32 | 2-12-91/11:12 |
| | 1.0833 | 0.03 | 0.06 |
| | 1.1667 | 0.03 | 0.06 |
| | 1.25 | 0.04 | 0.06 |
| | 1.3333 | 0.04 | 0.06 |
| | 1.4166 | 0.04 | 0.06 |
| | 1.5 | 0.05 | 0.05 |
| | 1.5833 | 0.04 | 0.05 |
| | 1.6667 | 0.05 | 0.05 |
| | 1.75 | 0.05 | 0.05 |
| | 1.8333 | 0.06 | 0.04 |
| | 1.9167 | 0.05 | 0.04 |
| | 2 | 0.06 | 0.04 |
| | 2.5 | 0.06 | 0.03 |
| | 3 | 0.08 | 0.02 |
| | 3.5 | 0.08 | 0.02 |
| | 4 | 0.08 | 0.01 |
| | 4.5 | 0.09 | 0.01 |
| | 5 | 0.09 | 0.01 |
| | 5.5 | 0.09 | 0.01 |
| | 6 | 0.09 | 0.01 |
| | 6.5 | 0.09 | 0.01 |
| | 7 | 0.09 | 0.01 |
| | 7.5 | 0.1 | 0.01 |
| | 8 | 0.1 | 0.01 |
| | 8.5 | 0.11 | 0 |
| | 9 | 0.11 | 0 |
| | 9.5 | 0.11 | 0 |
| | 10 | 0.11 | 0 |
| | 11 | 0.11 | 0 |
| | 12 | 0.11 | 0 |
| | 13 | 0.11 | 0 |
| | 14 | 0.11 | 0 |
| | 15 | 0.12 | 0 |
| | 16 | 0.12 | 0 |
| | 17 | 0.13 | 0 |
| | 18 | 0.13 | 0 |
| | 19 | 0.13 | 0 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002905

Table H17. Summary of SB-17B Pump Test Data
Pumping SB-17B

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 49.87 | 49.87 |
| Date/Time | | 2-12-91/10:32 | 2-12-91/11:12 |
| | 0 | 0 | 10.39 |
| | 0.0033 | 0.01 | 10.99 |
| | 0.0066 | 0.13 | 10.88 |
| | 0.0099 | 0.11 | 10.82 |
| | 0.0133 | 0.09 | 10.77 |
| | 0.0166 | 0.18 | 10.75 |
| | 0.02 | 0.28 | 10.72 |
| | 0.0233 | 0.36 | 10.68 |
| | 0.0266 | 0.42 | 10.63 |
| | 0.03 | 0.5 | 10.6 |
| | 0.0333 | 0.58 | 10.56 |
| | 0.05 | 0.9 | 10.39 |
| | 0.0666 | 1.15 | 10.22 |
| | 0.0833 | 1.43 | 10.06 |
| | 0.1 | 1.69 | 9.89 |
| | 0.1166 | 1.89 | 9.73 |
| | 0.1333 | 2.12 | 9.57 |
| | 0.15 | 2.31 | 9.42 |
| | 0.1666 | 2.5 | 9.27 |
| | 0.1833 | 2.69 | 9.12 |
| | 0.2 | 2.79 | 8.97 |
| | 0.2166 | 2.87 | 8.82 |
| | 0.2333 | 2.99 | 8.68 |
| | 0.25 | 3.15 | 8.53 |
| | 0.2666 | 3.29 | 8.39 |
| | 0.2833 | 3.41 | 8.25 |
| | 0.3 | 3.5 | 8.12 |
| | 0.3166 | 3.57 | 7.98 |
| | 0.3333 | 3.73 | 7.85 |
| | 0.4167 | 4.33 | 7.21 |
| | 0.5 | 4.76 | 6.62 |
| | 0.5833 | 5.23 | 6.08 |
| | 0.6667 | 5.7 | 5.57 |
| | 0.75 | 6.1 | 5.1 |
| | 0.8333 | 6.48 | 4.67 |
| | 0.9167 | 6.84 | 4.27 |
| | 1 | 7.17 | 3.9 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002906

Table H17. Summary of SB-17B Pump Test Data (continued)
Pumping SB-17B

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 49.87 | 49.87 |
| Date/Time | | 2-12-91/10:32 | 2-12-91/11:12 |
| | 1.0833 | 7.45 | 3.56 |
| | 1.1667 | 7.7 | 3.26 |
| | 1.25 | 7.92 | 2.97 |
| | 1.3333 | 8.15 | 2.71 |
| | 1.4166 | 8.33 | 2.47 |
| | 1.5 | 8.57 | 2.25 |
| | 1.5833 | 8.78 | 2.07 |
| | 1.6667 | 8.89 | 1.87 |
| | 1.75 | 9.03 | 1.73 |
| | 1.8333 | 9.18 | 1.57 |
| | 1.9167 | 9.23 | 1.43 |
| | 2 | 9.36 | 1.3 |
| | 2.5 | 9.89 | 0.74 |
| | 3 | 10.13 | 0.43 |
| | 3.5 | 10.48 | 0.26 |
| | 4 | 10.6 | 0.16 |
| | 4.5 | 10.68 | 0.11 |
| | 5 | 10.77 | 0.08 |
| | 5.5 | 10.77 | 0.07 |
| | 6 | 10.76 | 0.05 |
| | 6.5 | 10.81 | 0.05 |
| | 7 | 10.84 | 0.04 |
| | 7.5 | 10.85 | 0.04 |
| | 8 | 10.87 | 0.04 |
| | 8.5 | 10.87 | 0.03 |
| | 9 | 10.92 | 0.03 |
| | 9.5 | 10.93 | 0.03 |
| | 10 | 10.94 | 0.03 |
| | 11 | 10.87 | 0.02 |
| | 12 | 10.79 | 0.02 |
| | 13 | 10.79 | 0.02 |
| | 14 | 10.8 | 0.02 |
| | 15 | 10.85 | 0.01 |
| | 16 | 10.95 | 0.01 |
| | 17 | 10.97 | 0.01 |
| | 18 | 11.03 | 0.01 |
| | 19 | 11 | 0.01 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002907

Table H18. Summary of SB-17 Pump Test Data
Pumping SB-17

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 48.51 | 48.51 |
| Date/Time | | 2-12-91/13:07 | 2-12-91/13:23 |
| | 0 | 0 | 1.44 |
| | 0.0033 | 0.26 | 1.29 |
| | 0.0066 | 0.23 | 1.25 |
| | 0.0099 | 0.11 | 1.28 |
| | 0.0133 | 0.03 | 1.26 |
| | 0.0166 | 0 | 1.22 |
| | 0.02 | 0.03 | 1.19 |
| | 0.0233 | 0.07 | 1.18 |
| | 0.0266 | 0.13 | 1.17 |
| | 0.03 | 0.16 | 1.14 |
| | 0.0333 | 0.18 | 1.12 |
| | 0.05 | 0.34 | 1.04 |
| | 0.0666 | 0.45 | 0.98 |
| | 0.0833 | 0.51 | 0.92 |
| | 0.1 | 0.56 | 0.87 |
| | 0.1166 | 0.59 | 0.83 |
| | 0.1333 | 0.62 | 0.8 |
| | 0.15 | 0.64 | 0.77 |
| | 0.1666 | 0.66 | 0.74 |
| | 0.1833 | 0.68 | 0.71 |
| | 0.2 | 0.62 | 0.68 |
| | 0.2166 | 0.58 | 0.65 |
| | 0.2333 | 0.56 | 0.63 |
| | 0.25 | 0.55 | 0.61 |
| | 0.2666 | 0.55 | 0.58 |
| | 0.2833 | 0.54 | 0.56 |
| | 0.3 | 0.55 | 0.54 |
| | 0.3166 | 0.55 | 0.52 |
| | 0.3333 | 0.55 | 0.5 |
| | 0.4167 | 0.59 | 0.42 |
| | 0.5 | 0.63 | 0.36 |
| | 0.5833 | 0.65 | 0.31 |
| | 0.6667 | 0.67 | 0.28 |
| | 0.75 | 0.68 | 0.24 |
| | 0.8333 | 0.71 | 0.22 |
| | 0.9167 | 0.73 | 0.2 |
| | 1 | 0.73 | 0.18 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002908

Table H18. Summary of SB-17 Pump Test Data
Pumping SB-17

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 48.51 | 48.51 |
| Date/Time | | 2-12-91/13:07 | 2-12-91/13:23 |
| | 1.0833 | 0.74 | 0.17 |
| | 1.1667 | 0.74 | 0.16 |
| | 1.25 | 0.78 | 0.15 |
| | 1.3333 | 0.91 | 0.14 |
| | 1.4166 | 0.88 | 0.13 |
| | 1.5 | 0.85 | 0.13 |
| | 1.5833 | 0.85 | 0.12 |
| | 1.6667 | 0.85 | 0.11 |
| | 1.75 | 0.85 | 0.11 |
| | 1.8333 | 0.86 | 0.11 |
| | 1.9167 | 0.86 | 0.11 |
| | 2 | 0.85 | 0.1 |
| | 2.5 | 0.87 | 0.09 |
| | 3 | 0.89 | 0.08 |
| | 3.5 | 0.92 | 0.07 |
| | 4 | 0.94 | 0.07 |
| | 4.5 | 0.94 | 0.06 |
| | 5 | 0.98 | 0.06 |
| | 5.5 | 0.97 | 0.05 |
| | 6 | 0.98 | 0.05 |
| | 6.5 | 0.99 | 0.05 |
| | 7 | 1 | 0.05 |
| | 7.5 | 1 | 0.04 |
| | 8 | 1.01 | 0.04 |
| | 8.5 | 1.01 | 0.04 |
| | 9 | 1.03 | 0.03 |
| | 9.5 | 1.05 | 0.03 |
| | 10 | 1.06 | 0.03 |
| | 11 | 1.07 | 0.03 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002909

Table H19. Summary of SB-17A Pump Test Data
Pumping SB-17

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 49.82 | 49.82 |
| Date/Time | | 2-12-91/13:07 | 2-12-91/13:23 |
| | 0 | 0 | 0.02 |
| | 0.0033 | 0 | 0.02 |
| | 0.0066 | 0 | 0.02 |
| | 0.0099 | 0 | 0.02 |
| | 0.0133 | 0 | 0.02 |
| | 0.0166 | 0 | 0.02 |
| | 0.02 | 0 | 0.02 |
| | 0.0233 | 0 | 0.02 |
| | 0.0266 | 0 | 0.02 |
| | 0.03 | 0 | 0.02 |
| | 0.0333 | 0 | 0.02 |
| | 0.05 | 0 | 0.02 |
| | 0.0666 | 0 | 0.02 |
| | 0.0833 | 0 | 0.02 |
| | 0.1 | 0 | 0.02 |
| | 0.1166 | 0 | 0.02 |
| | 0.1333 | 0 | 0.02 |
| | 0.15 | 0 | 0.02 |
| | 0.1666 | 0 | 0.02 |
| | 0.1833 | 0 | 0.02 |
| | 0.2 | 0 | 0.02 |
| | 0.2166 | 0 | 0.02 |
| | 0.2333 | 0 | 0.02 |
| | 0.25 | 0 | 0.02 |
| | 0.2666 | 0 | 0.02 |
| | 0.2833 | 0 | 0.02 |
| | 0.3 | 0 | 0.02 |
| | 0.3166 | 0 | 0.02 |
| | 0.3333 | 0 | 0.02 |
| | 0.4167 | 0 | 0.02 |
| | 0.5 | 0 | 0.02 |
| | 0.5833 | 0 | 0.02 |
| | 0.6667 | 0 | 0.02 |
| | 0.75 | 0 | 0.02 |
| | 0.8333 | 0 | 0.02 |
| | 0.9167 | 0 | 0.02 |
| | 1 | 0 | 0.02 |

* Water level deviation from static as measured with a Hermit Data Logger.

MCK0002910

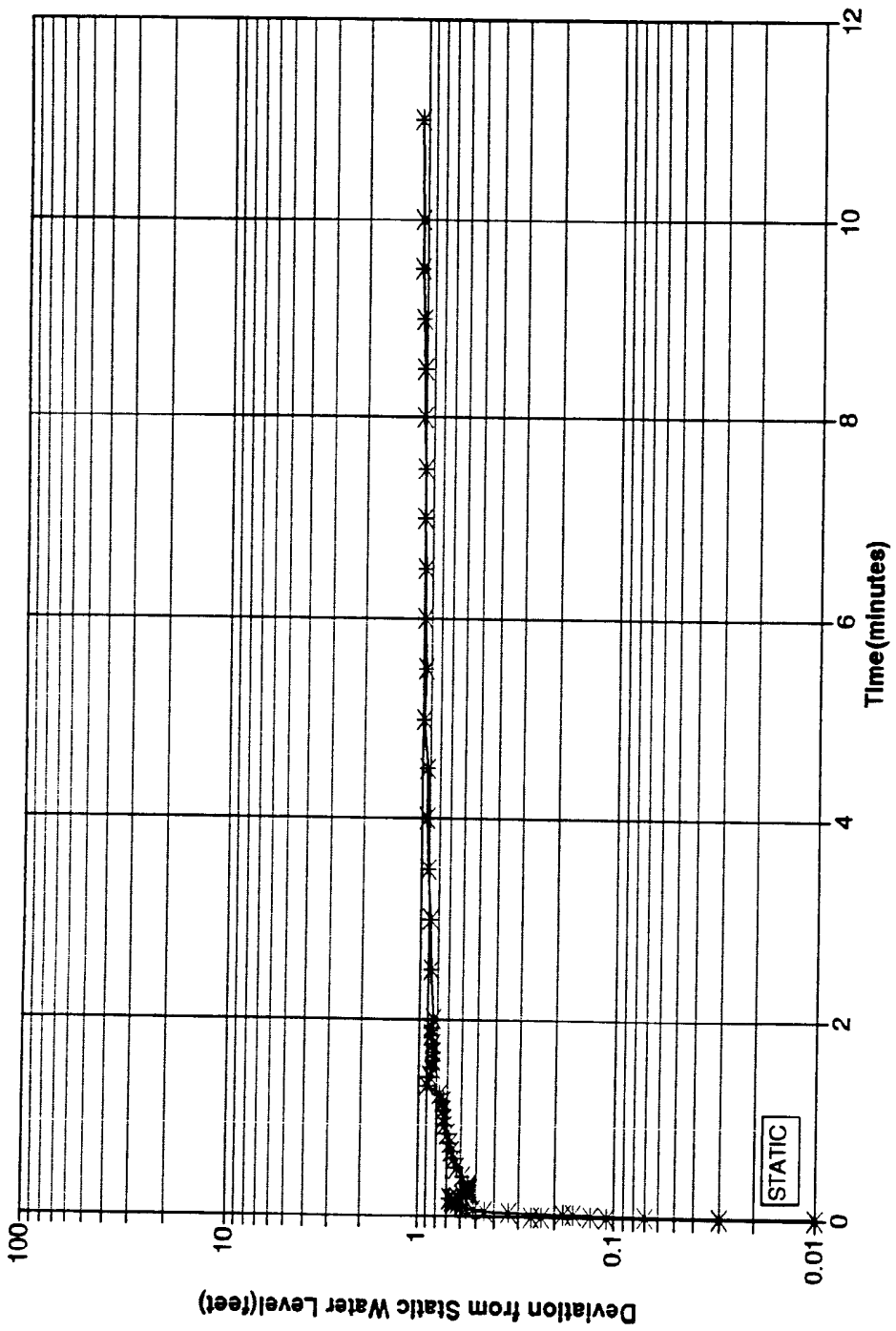
Table H19. Summary of SB-17A Pump Test Data (continued)
Pumping SB-17

| | Time From
Start of
Test
(Minutes) | PUMP OUT
*Change
In Water
Level
(feet) | RECOVERY
*Change
In Water
Level
(feet) |
|--------------------|--|--|--|
| Static Water Level | | 49.82 | 49.82 |
| Date/Time | | 2-12-91/13:07 | 2-12-91/13:23 |
| | 1.0833 | 0 | 0.02 |
| | 1.1667 | 0 | 0.02 |
| | 1.25 | 0 | 0.02 |
| | 1.3333 | 0 | 0.02 |
| | 1.4166 | 0 | 0.02 |
| | 1.5 | 0.01 | 0.02 |
| | 1.5833 | 0.01 | 0.02 |
| | 1.6667 | 0 | 0.02 |
| | 1.75 | 0.01 | 0.02 |
| | 1.8333 | 0 | 0.02 |
| | 1.9167 | 0.01 | 0.02 |
| | 2 | 0 | 0.02 |
| | 2.5 | 0.01 | 0.02 |
| | 3 | 0.01 | 0.02 |
| | 3.5 | 0.01 | 0.02 |
| | 4 | 0.01 | 0.02 |
| | 4.5 | 0.01 | 0.02 |
| | 5 | 0.01 | 0.02 |
| | 5.5 | 0.01 | 0.02 |
| | 6 | 0.01 | 0.02 |
| | 6.5 | 0.01 | 0.02 |
| | 7 | 0.01 | 0.02 |
| | 7.5 | 0.01 | 0.02 |
| | 8 | 0.01 | 0.01 |
| | 8.5 | 0.01 | 0.01 |
| | 9 | 0.02 | 0.01 |
| | 9.5 | 0.02 | 0.01 |
| | 10 | 0.02 | 0.01 |
| | 11 | 0.02 | 0.01 |



* Water level deviation from static as measured with a Hermit Data Logger.

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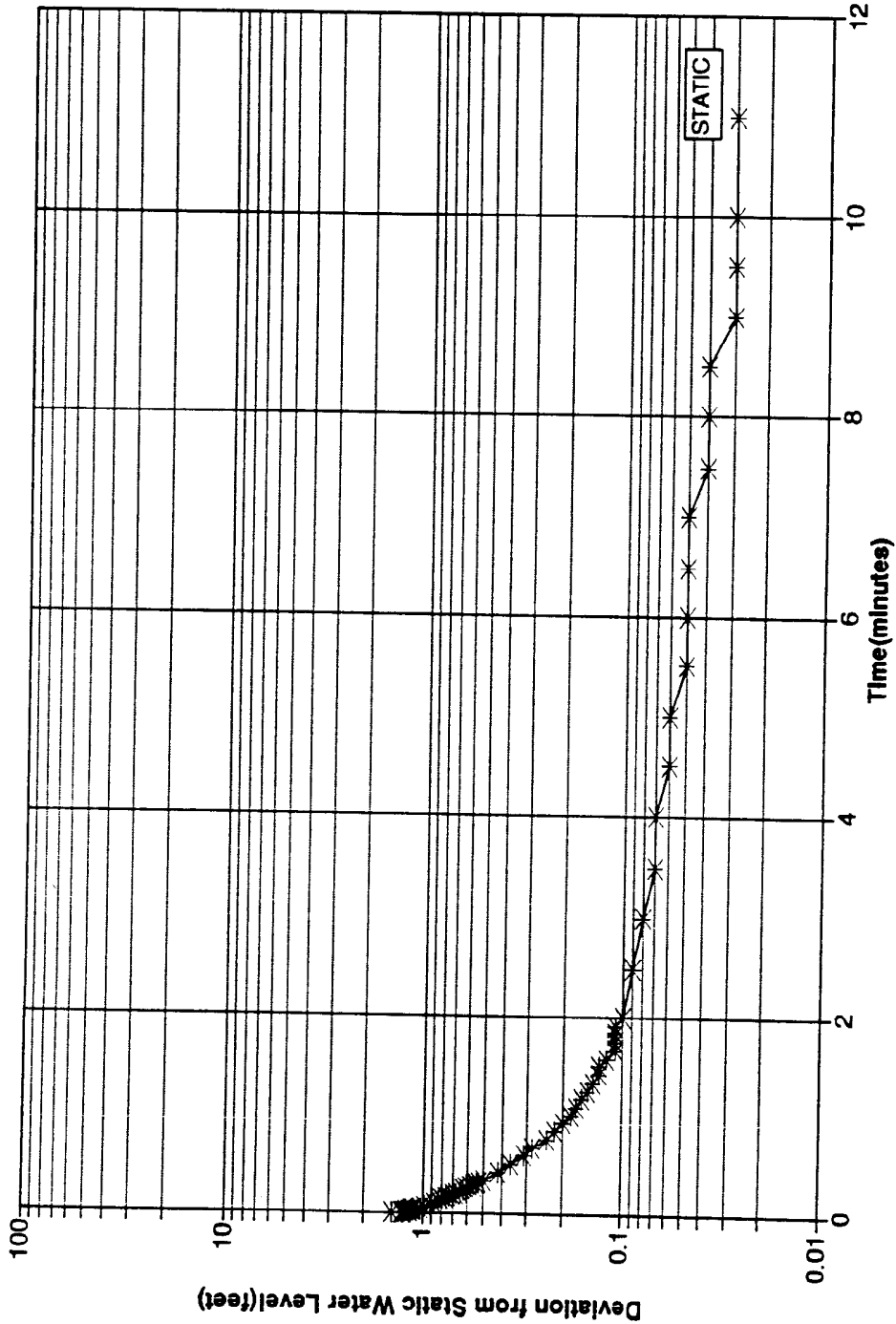
McKESSON-SANTA FE SPRINGS SB-17 PUMP OUT (PUMPING)





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| | | |
|--|---|--------------|
| 
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Environmental Services | PLATE | |
| | H1 | |
| SB-17 PUMP OUT TEST | | |
| PUMPING WELL HYDROGRAPH | | |
| McKesson Corporation Property | | |
| Santa Fe Springs, California | | |
| DRAWN
JTL | APPROVED
 | DATE
2/92 |
| JOB NUMBER
17333,168.11 | | REVISED |

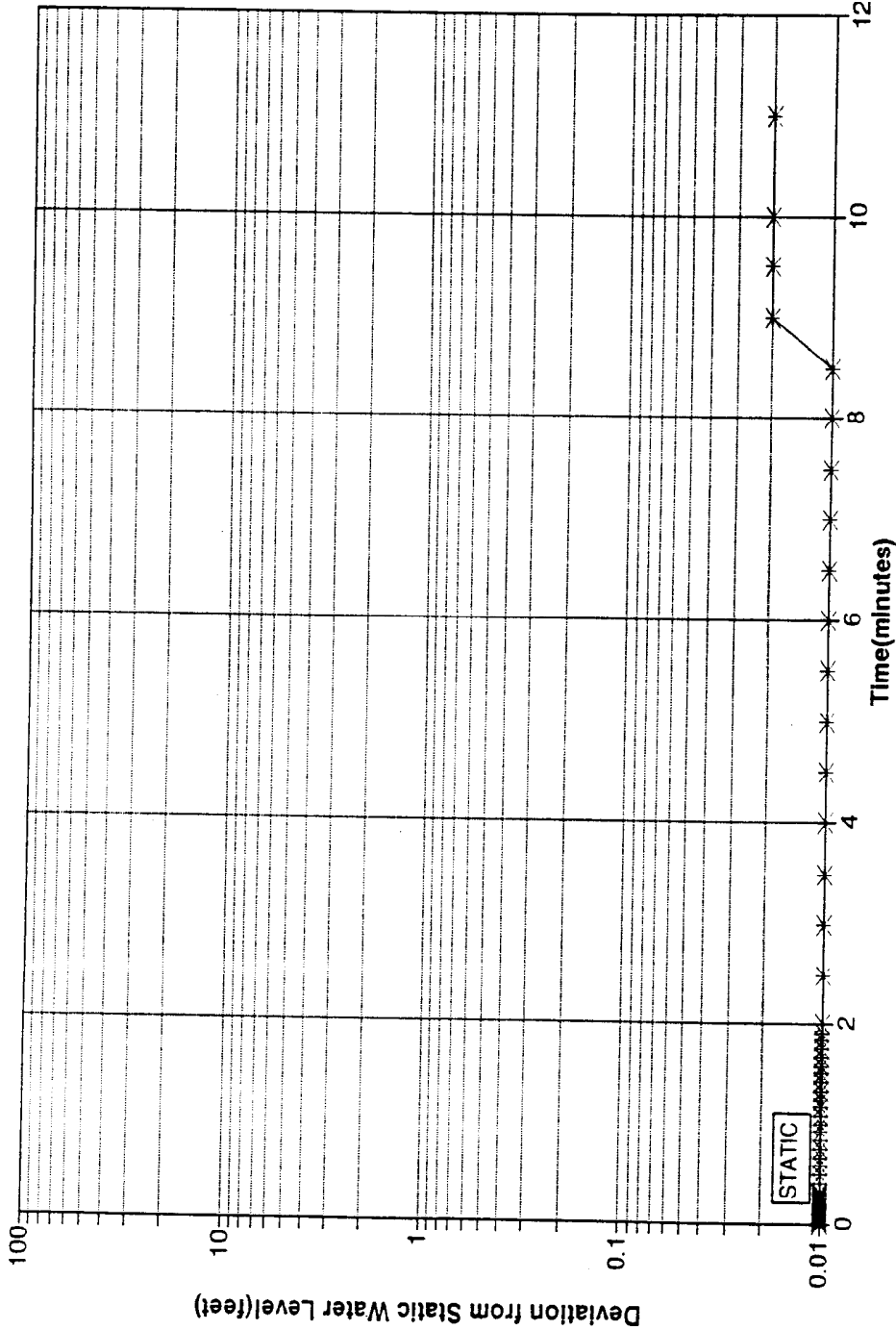
McKESSON-SANTA FE SPRINGS SB-17 RECOVERY (AFTER PUMPING)



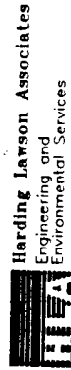
MCK0002913

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|--|----------------------------|---|-------------------------|
|  Harding Lawson Associates
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<h2 style="margin: 0;">H2</h2> | |
| SB-17 PUMP OUT TEST
PUMPING WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California | | APPROVED
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2/92 |
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JTL | JOB NUMBER
17333,168.11 | | |

McKESSON-SANTA FE SPRINGS SB-17A PUMP OUT (PUMPING SB-17)



MCK0002914



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SB-17A PUMP OUT TEST
OBSERVATION WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

PLATE

H3

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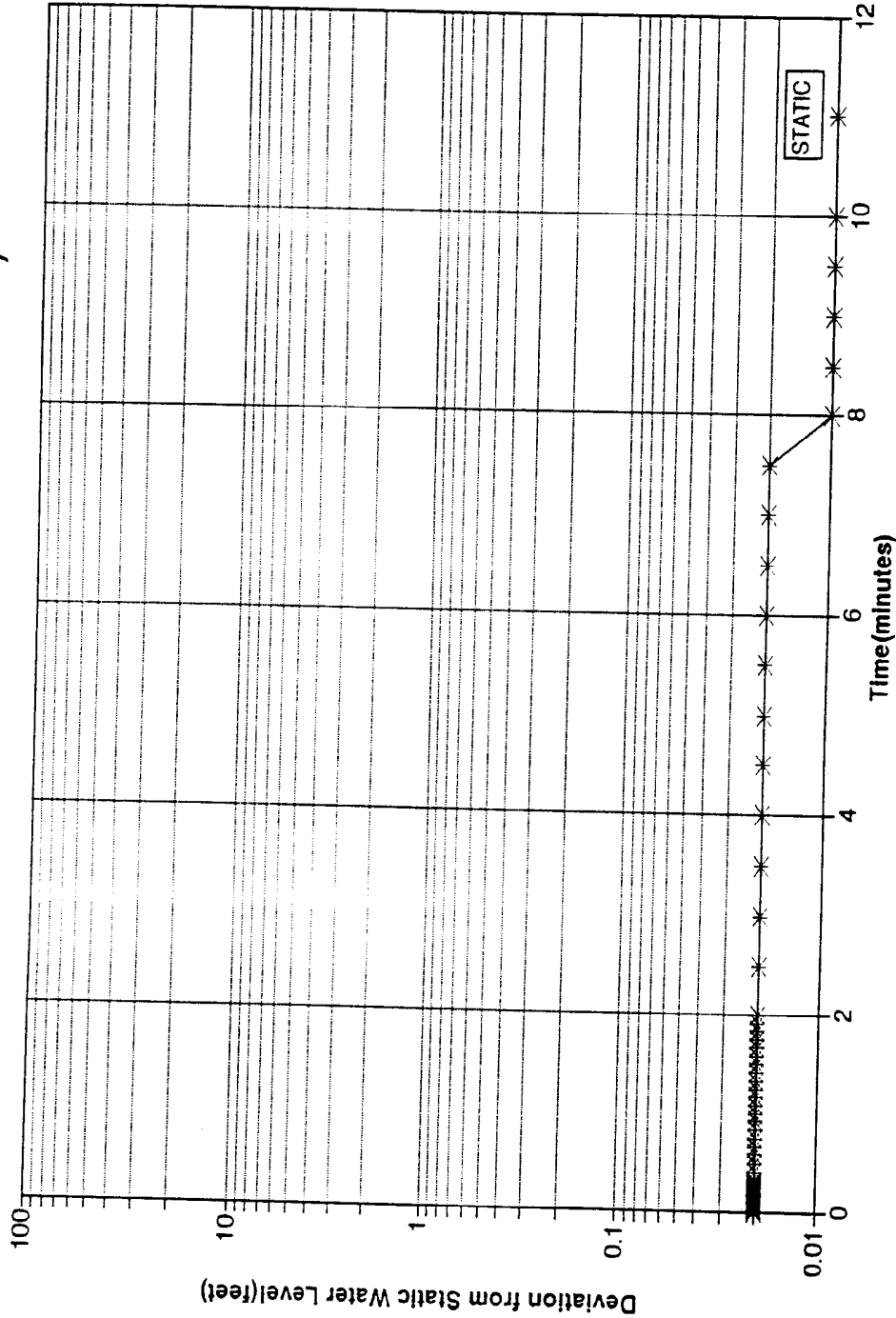
JOB NUMBER
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McKESSON-SANTA FE SPRINGS SB-17A RECOVERY (AFTER PUMPING SB-17)



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SB-17A PUMP OUT TEST
OBSERVATION WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

PLATE

H4

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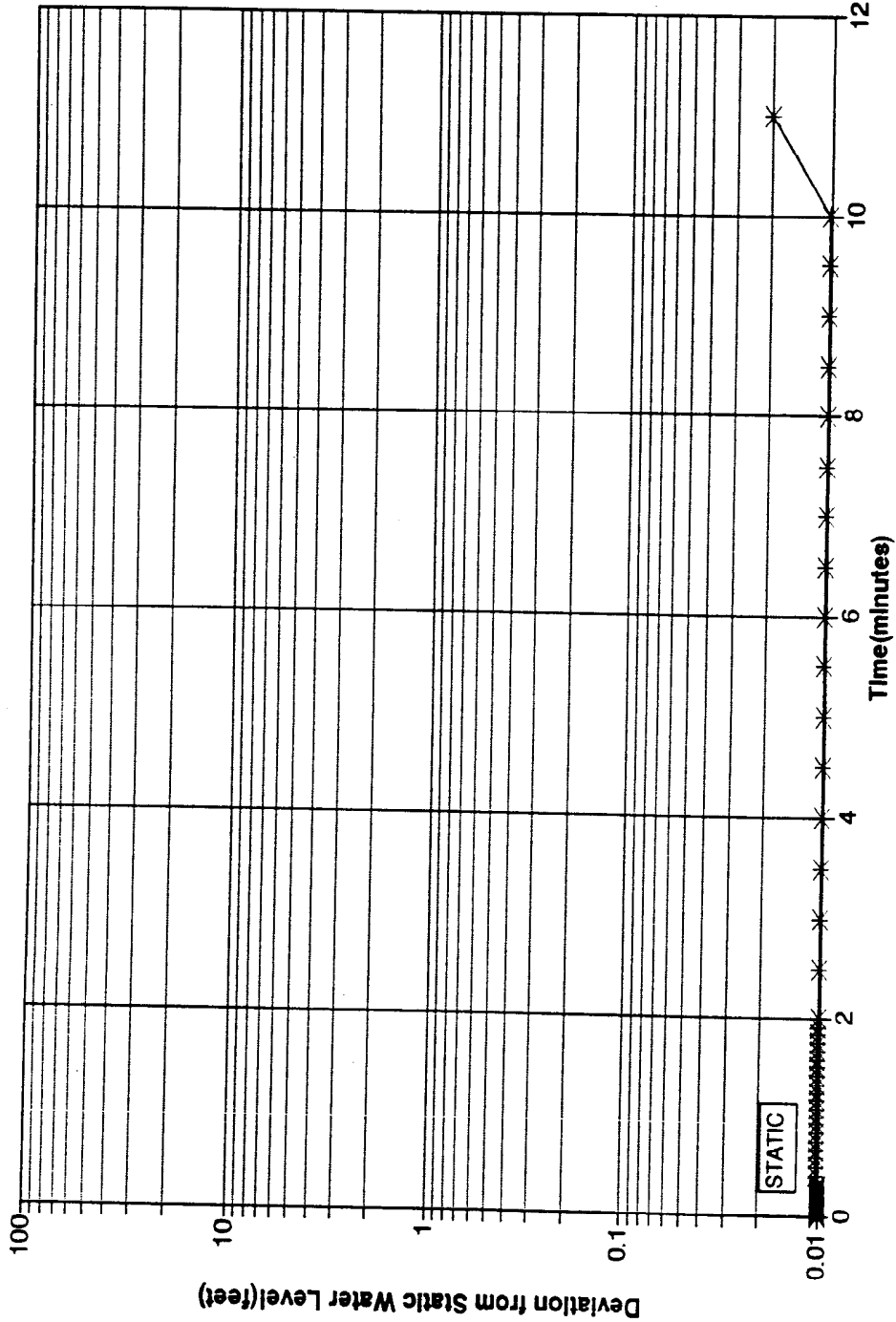
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McKESSON-SANTA FE SPRINGS SB-17B PUMP OUT (PUMPING SB-17)



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SB-17B PUMP OUT TEST
OBSERVATION WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

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H5

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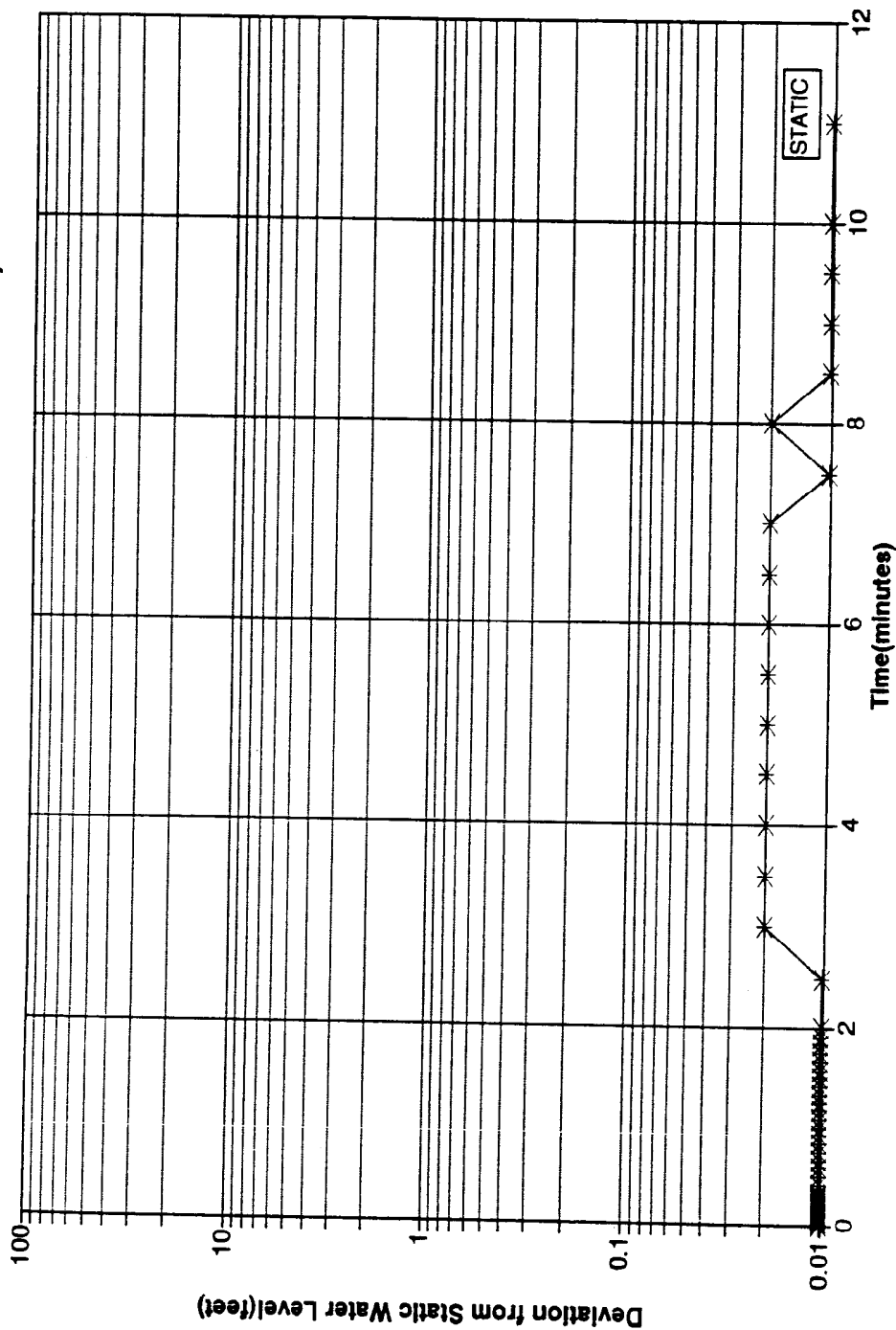
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McKESSON-SANTA FE SPRINGS SB-17B RECOVERY (AFTER PUMPING SB-17)



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PLATE

H6

SB-17B PUMP OUT TEST
OBSERVATION WELL HYDROGRAPH
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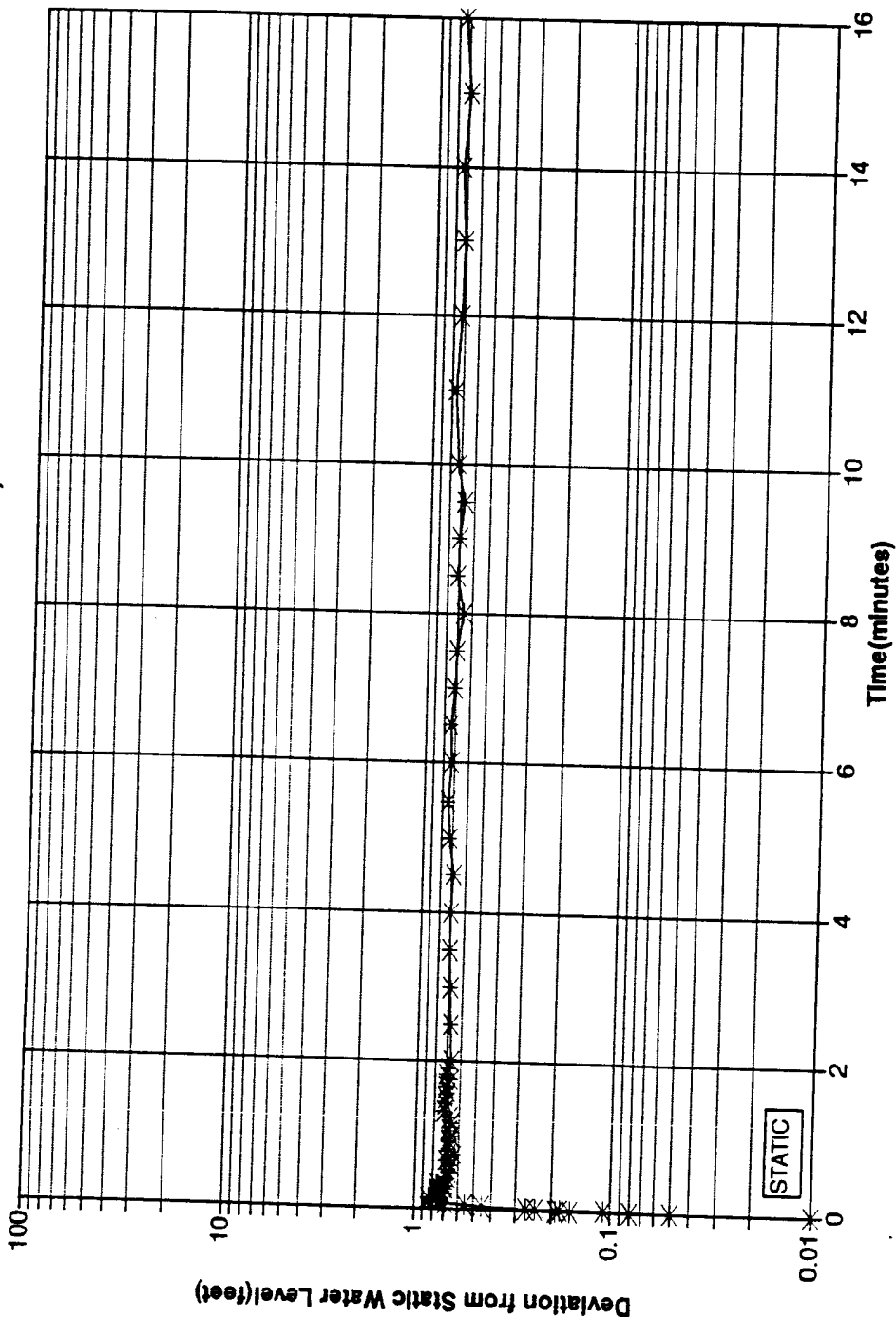
DATE

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McKESSON-SANTA FE SPRINGS SB-17A PUMP OUT (PUMPING)



MCK0002918

PLATE

H7

SB-17A PUMP OUT TEST
PUMPING WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

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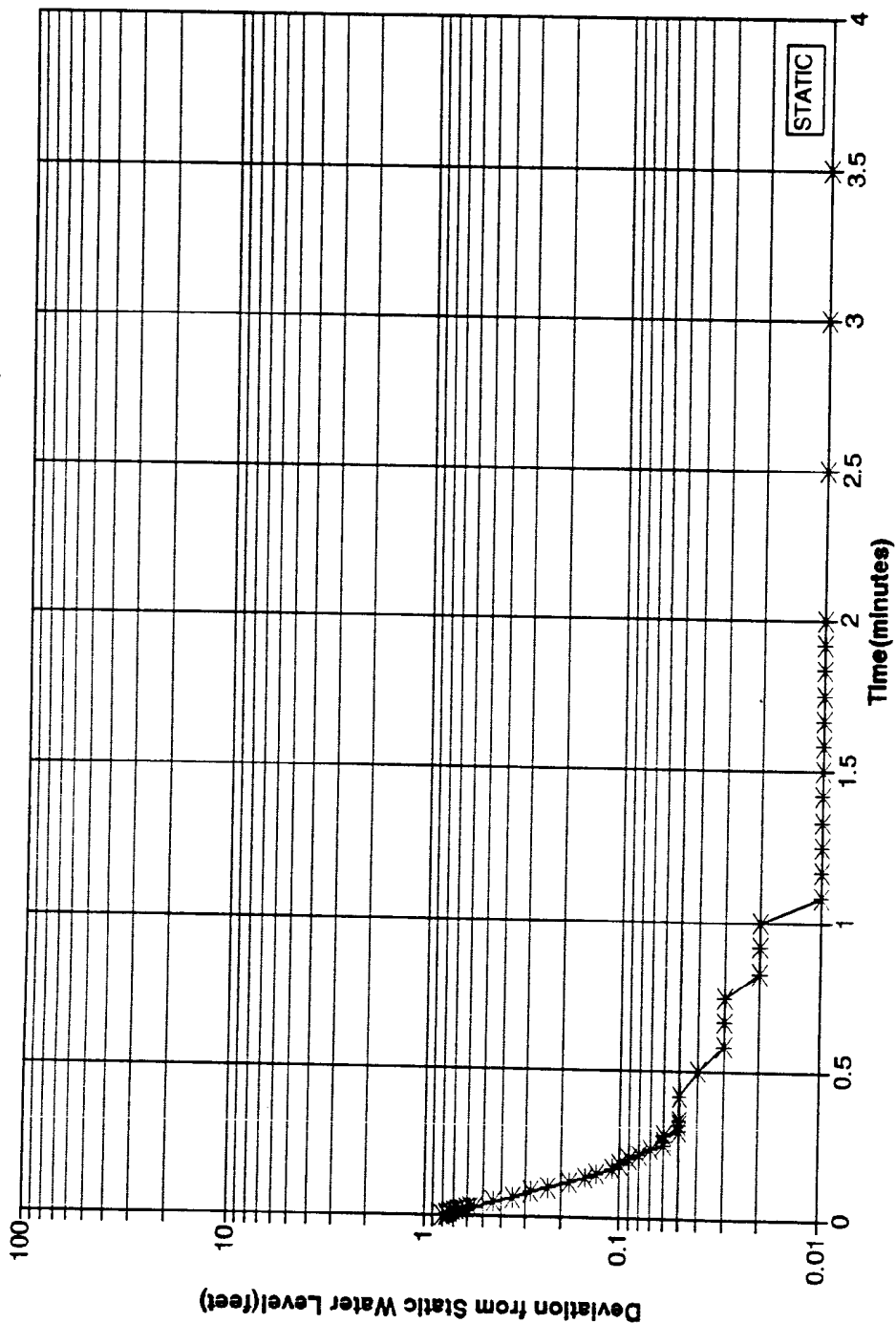
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McKESSON-SANTA FE SPRINGS SB-17A RECOVERY (AFTER PUMPING)



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SB-17A PUMP OUT TEST
PUMPING WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

PLATE

H8

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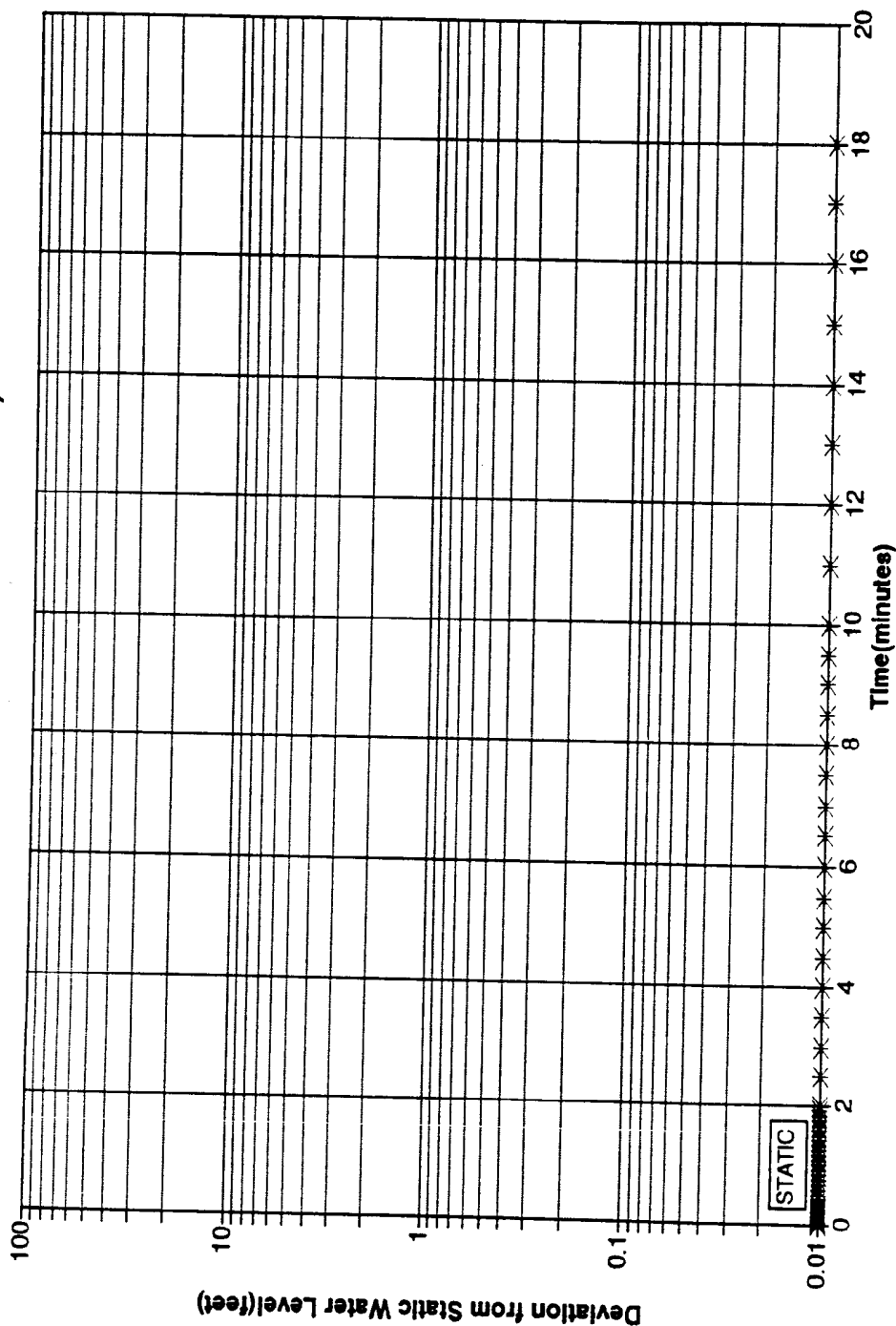
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McKESSON-SANTA FE SPRINGS SB-17 PUMP OUT (PUMPING SB-17A)



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PLATE

H9

SB-17 PUMP OUT TEST
OBSERVATION WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

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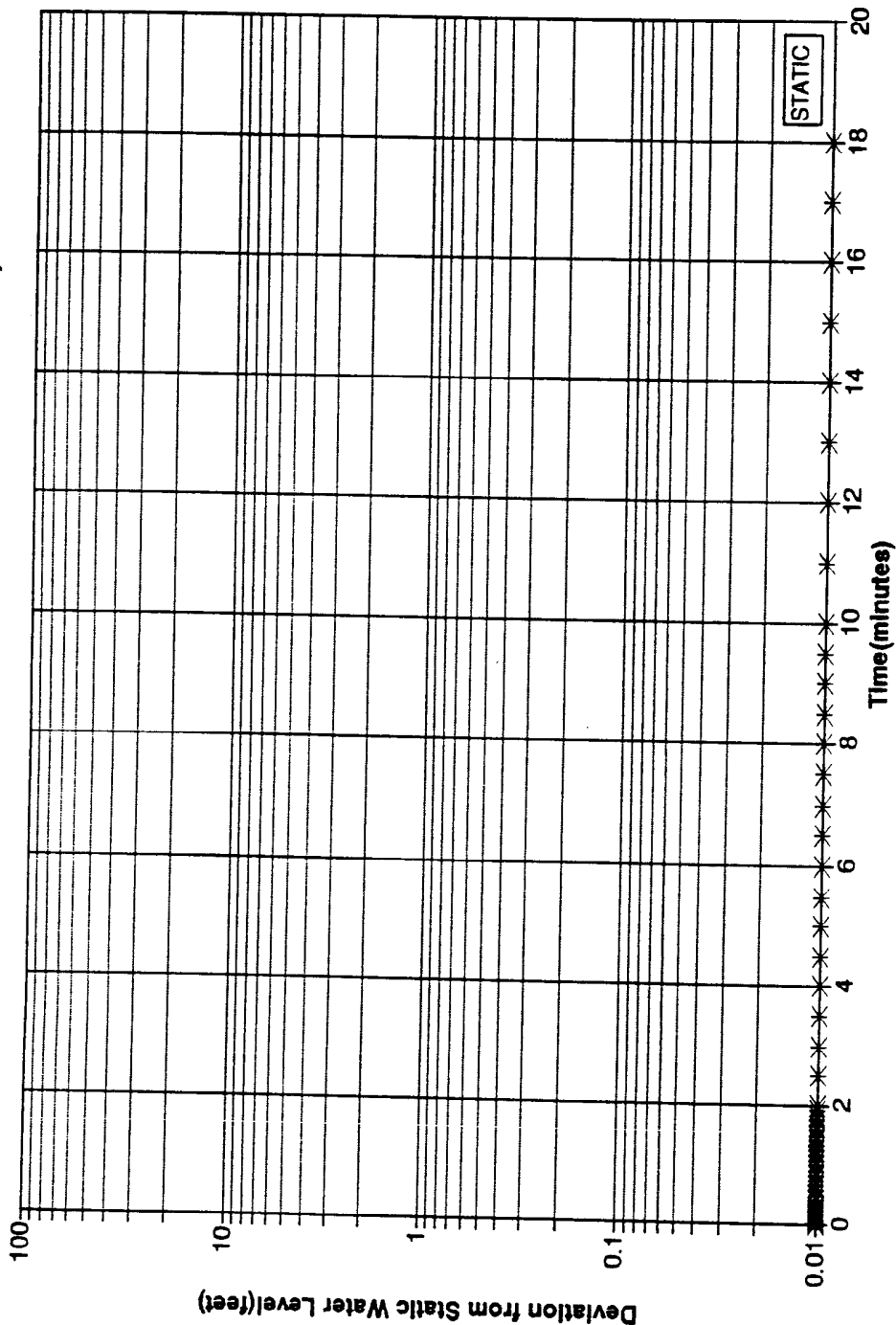
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McKESSON-SANTA FE SPRINGS SB-17 RECOVERY (AFTER PUMPING SB-17A)



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PLATE

SB-17 PUMP OUT TEST
OBSERVATION WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

H10

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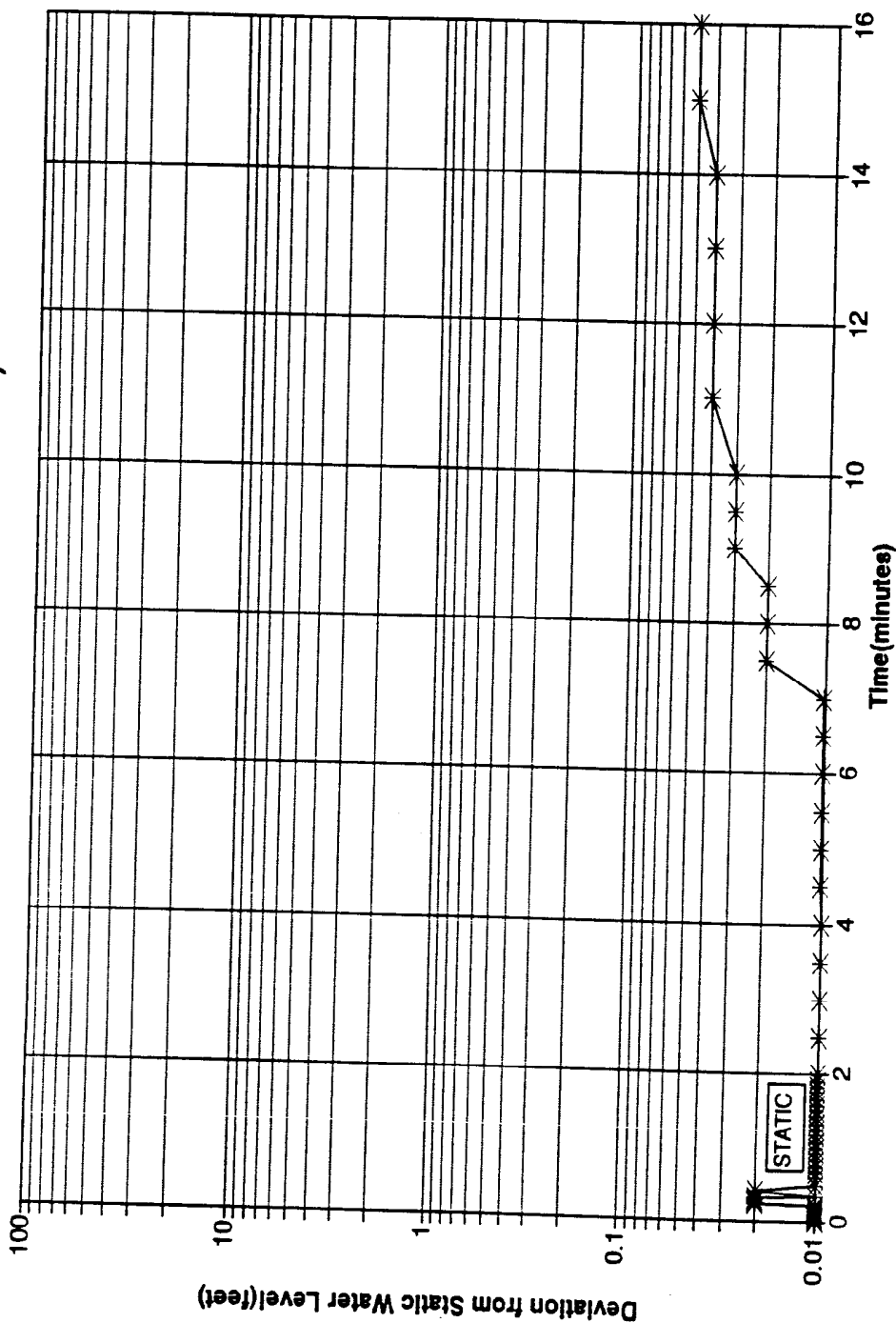
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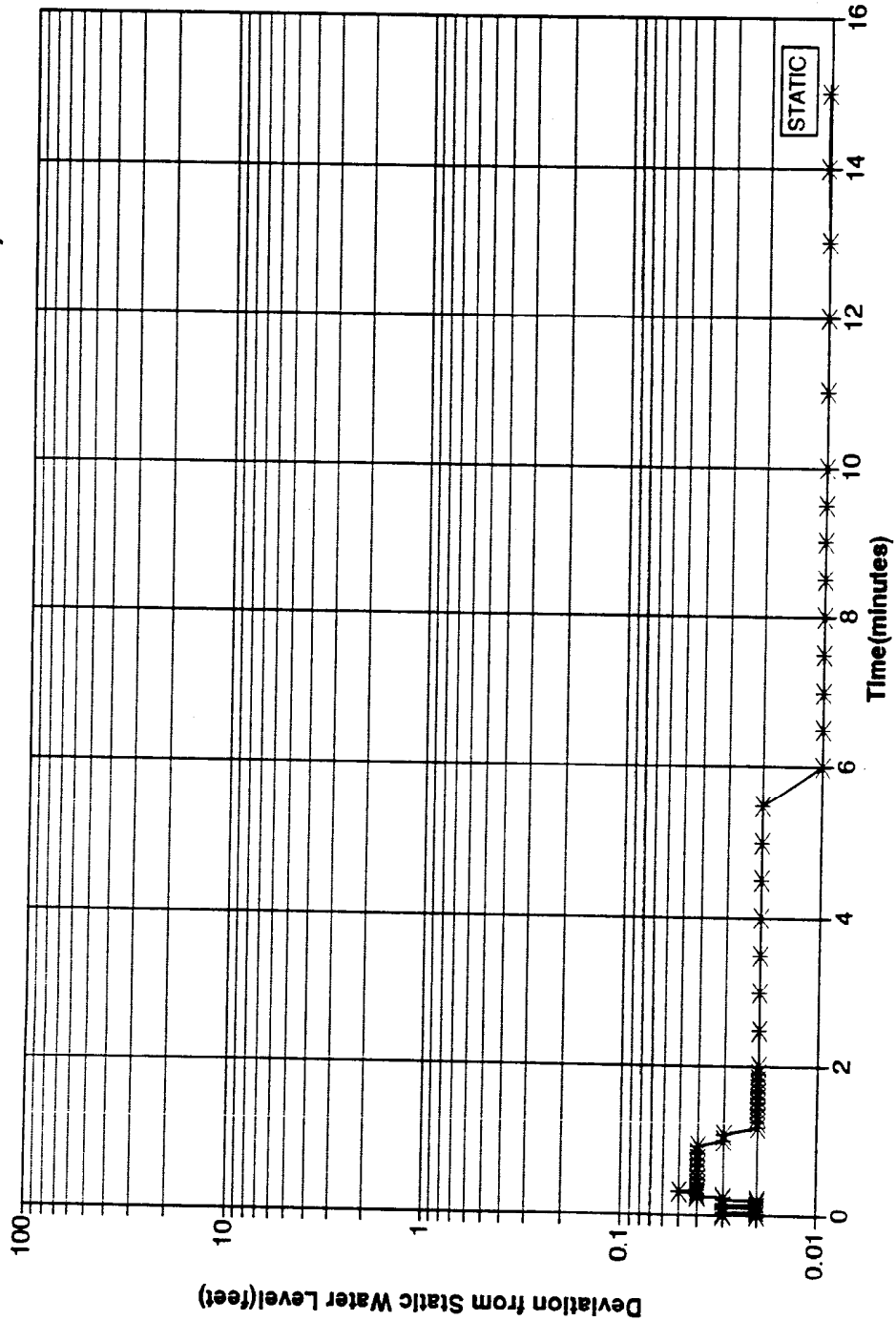
McKESSON-SANTA FE SPRINGS SB-17B PUMP OUT (PUMPING SB-17A)




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|  Harding Lawson Associates
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<h2>H11</h2> | |
| SB-17B PUMP OUT TEST
OBSERVATION WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California | | APPROVED
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2/92 |
| DRAWN
JTL | JOB NUMBER
17333,168.11 | DATE
2/92 | |

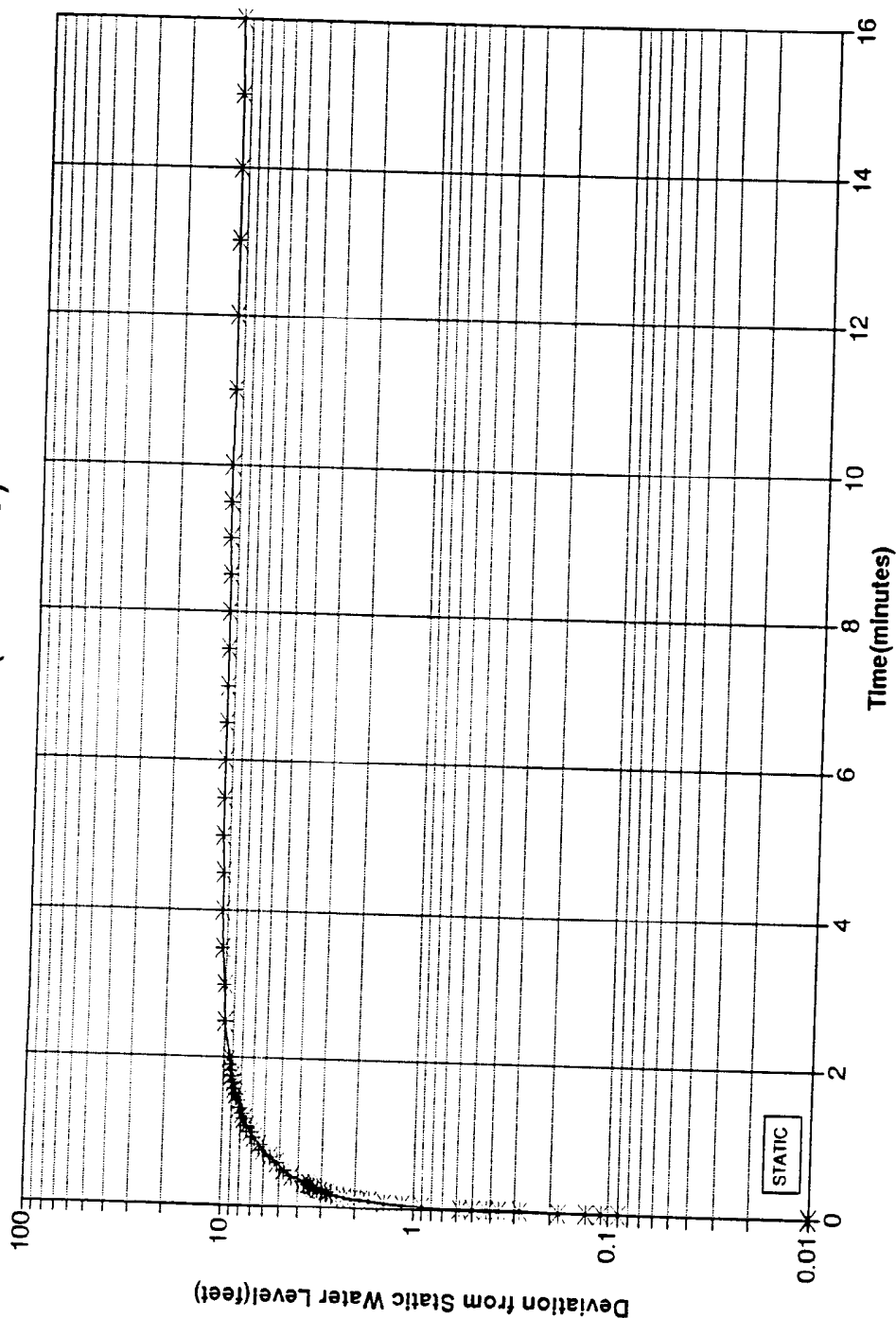
McKESSON-SANTA FE SPRINGS SB-17B RECOVERY (AFTER PUMPING SB-17A)



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|---|------------------------------------|--|---------------------------------|-----------------------------|
|  <p>Harding Lawson Associates
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Environmental Services</p> | | <p>SB-17B PUMP OUT TEST
OBSERVATION WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California</p> | | <p>PLATE
H12</p> |
| <p>DRAWN
JTL</p> | <p>JOB NUMBER
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<i>THC</i></p> | <p>REVISD
DATE
2/92</p> | <p>DATE</p> |

McKESSON-SANTA FE SPRINGS SB-17B PUMP OUT (PUMPING)



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SB-17B PUMP OUT TEST
PUMPING WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

PLATE

H13

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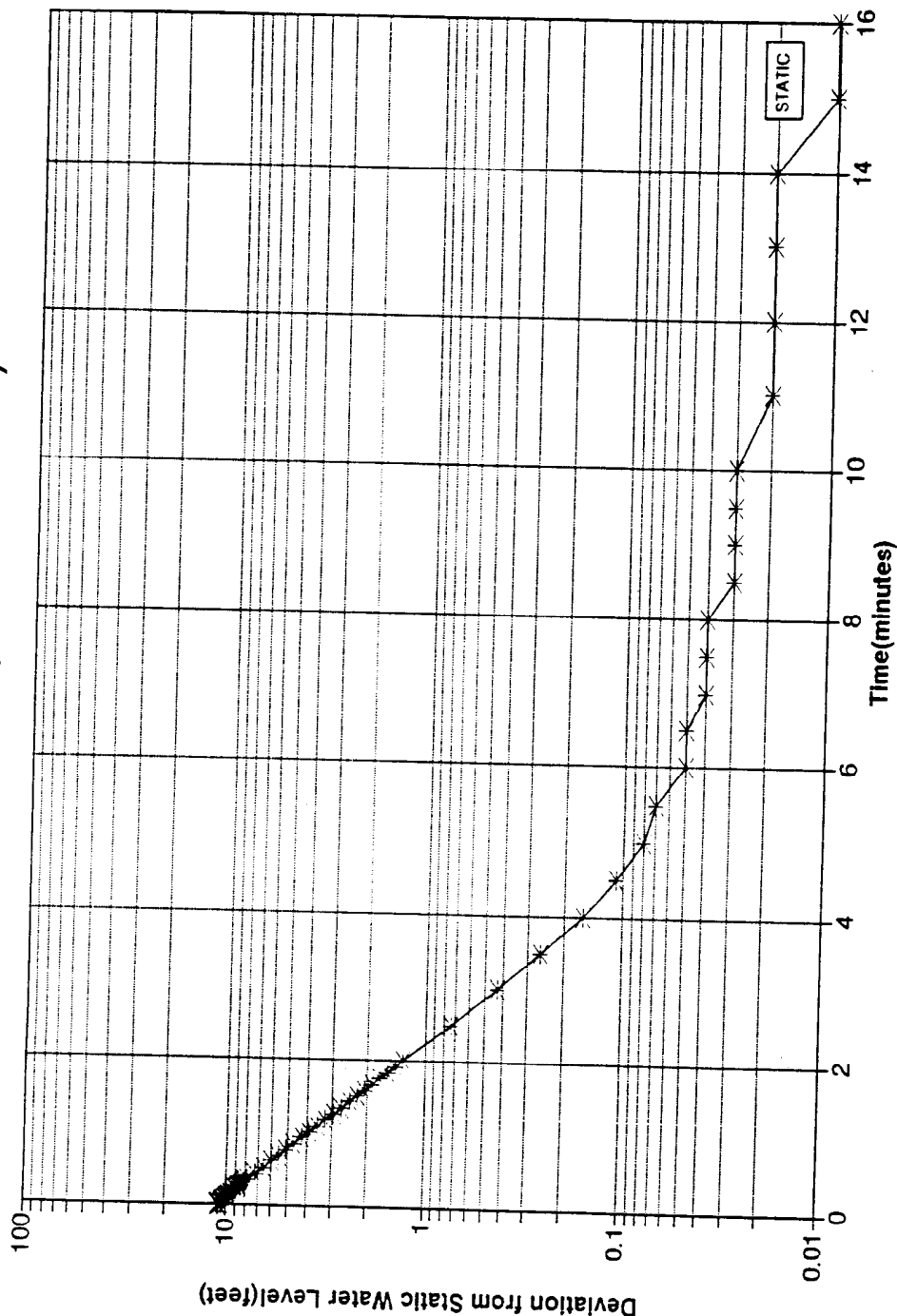
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McKESSON-SANTA FE SPRINGS SB-17B RECOVERY (AFTER PUMPING)



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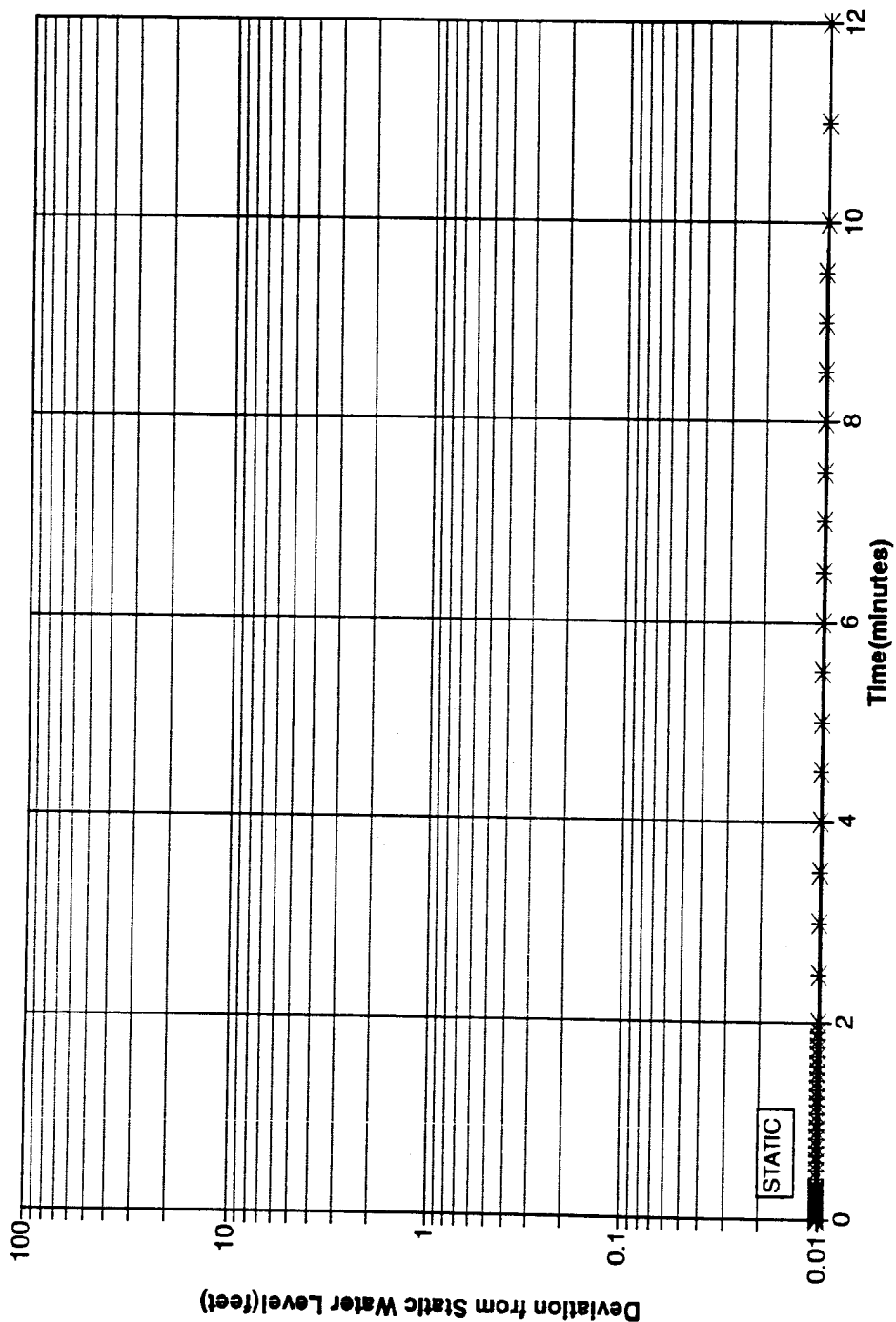
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SB-17B PUMP OUT TEST
PUMPING WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

PLATE

H14

McKESSON-SANTA FE SPRINGS SB-17 PUMP OUT (PUMPING SB-17B)



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PLATE

H15

SB-17 PUMP OUT TEST
OBSERVATION WELL HDYROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

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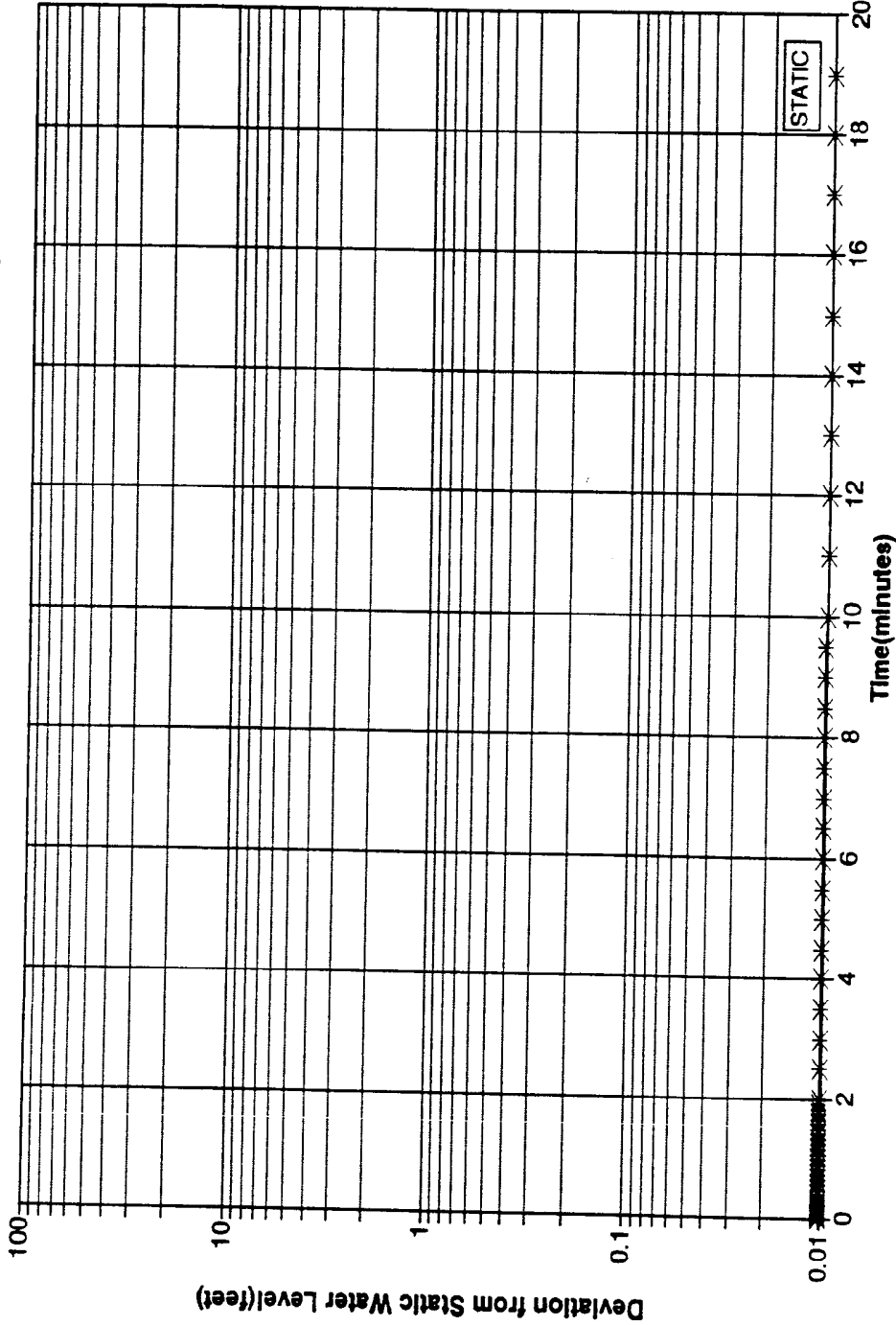
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McKESSON-SANTA FE SPRINGS SB-17 RECOVERY (AFTER PUMPING SB-17B)



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H16

SB-17 PUMP OUT TEST
OBSERVATION WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

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17333,168.11

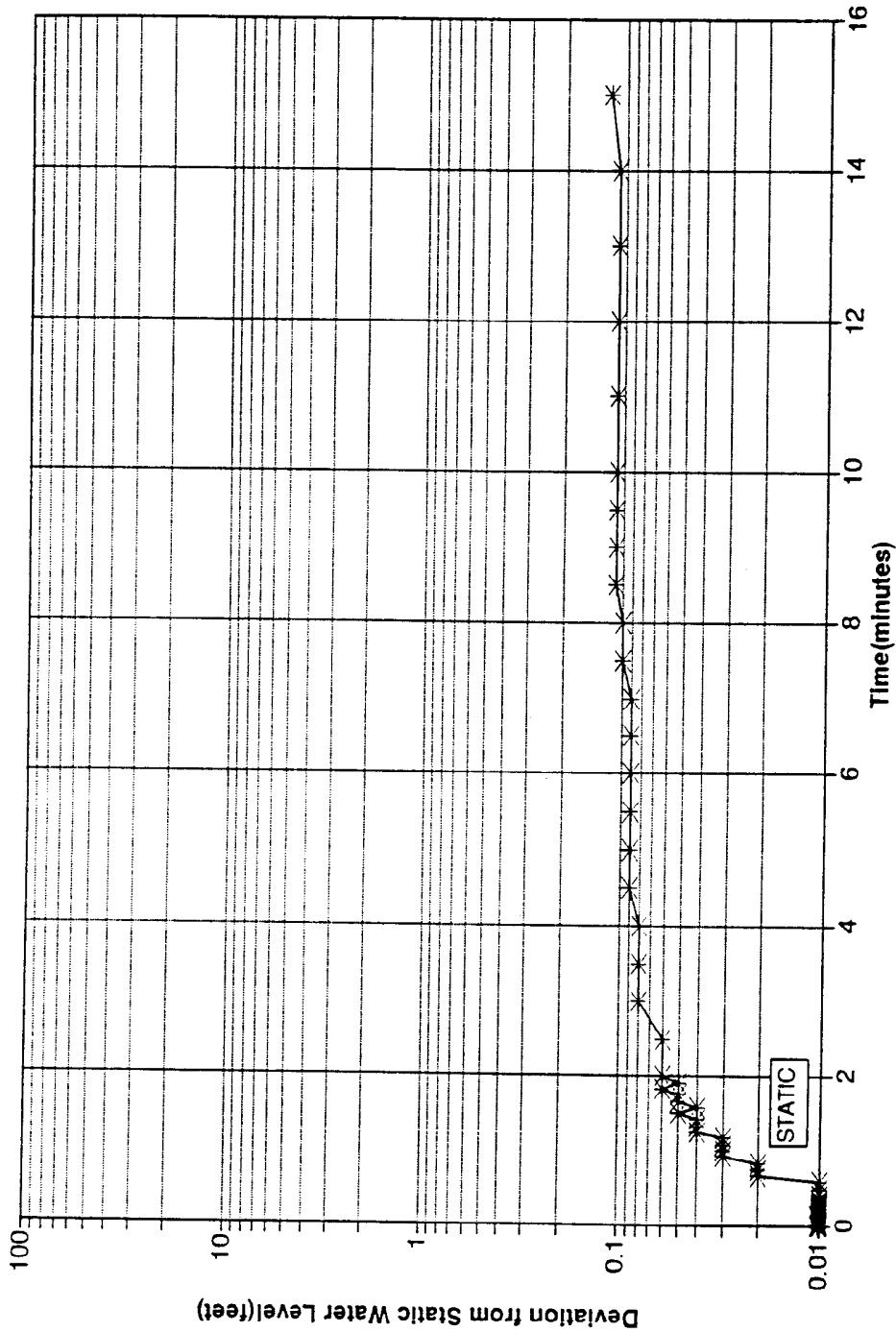
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McKESSON-SANTA FE SPRINGS SB-17A PUMP OUT (PUMPING SB-17B)



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PLATE

SB-17A PUMP OUT TEST
OBSERVATION WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

H17

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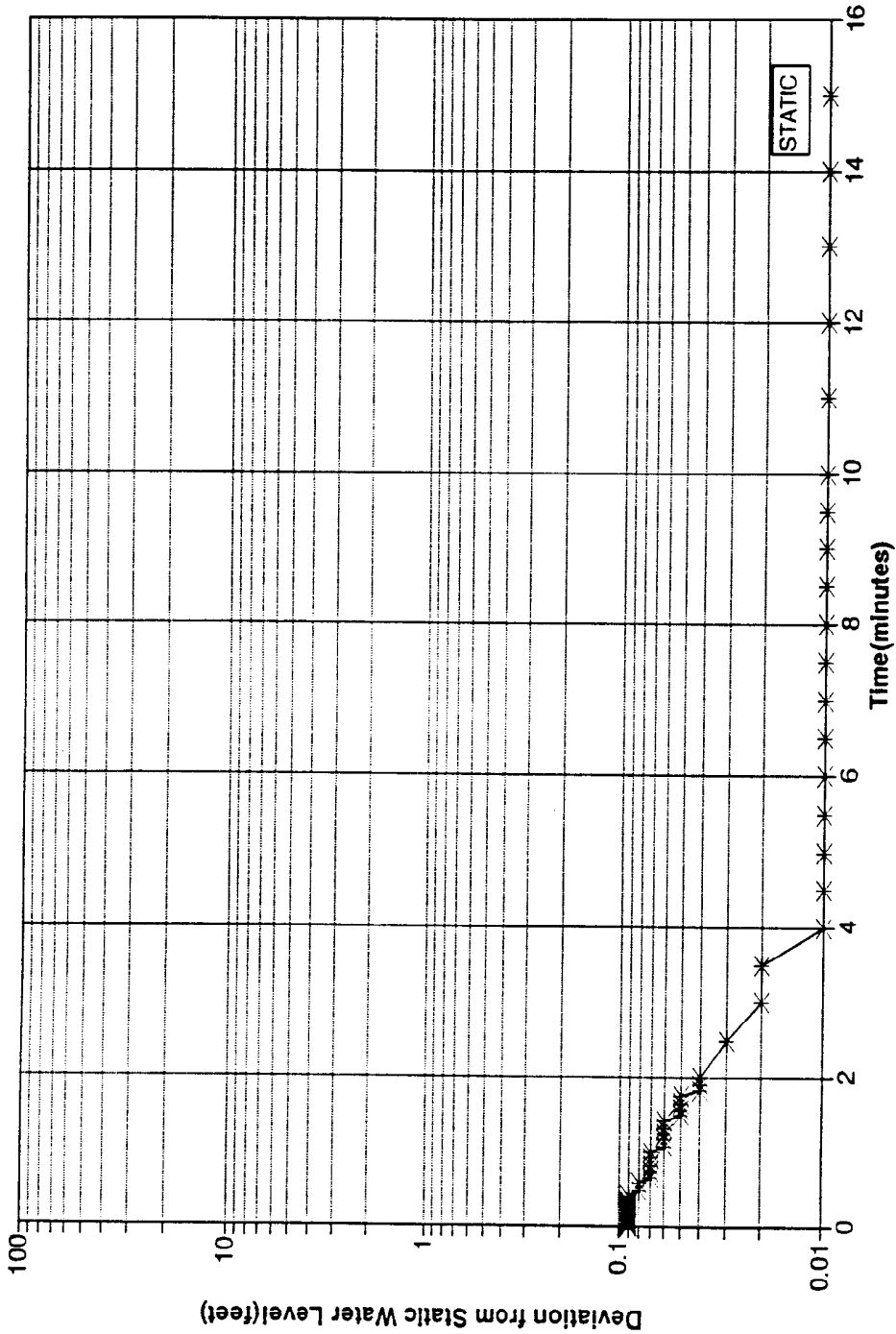
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McKESSON-SANTA FE SPRINGS SB-17A RECOVERY (AFTER PUMPING SB-17B)



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PLATE

H18

SB-17A PUMP OUT TEST
OBSERVATION WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

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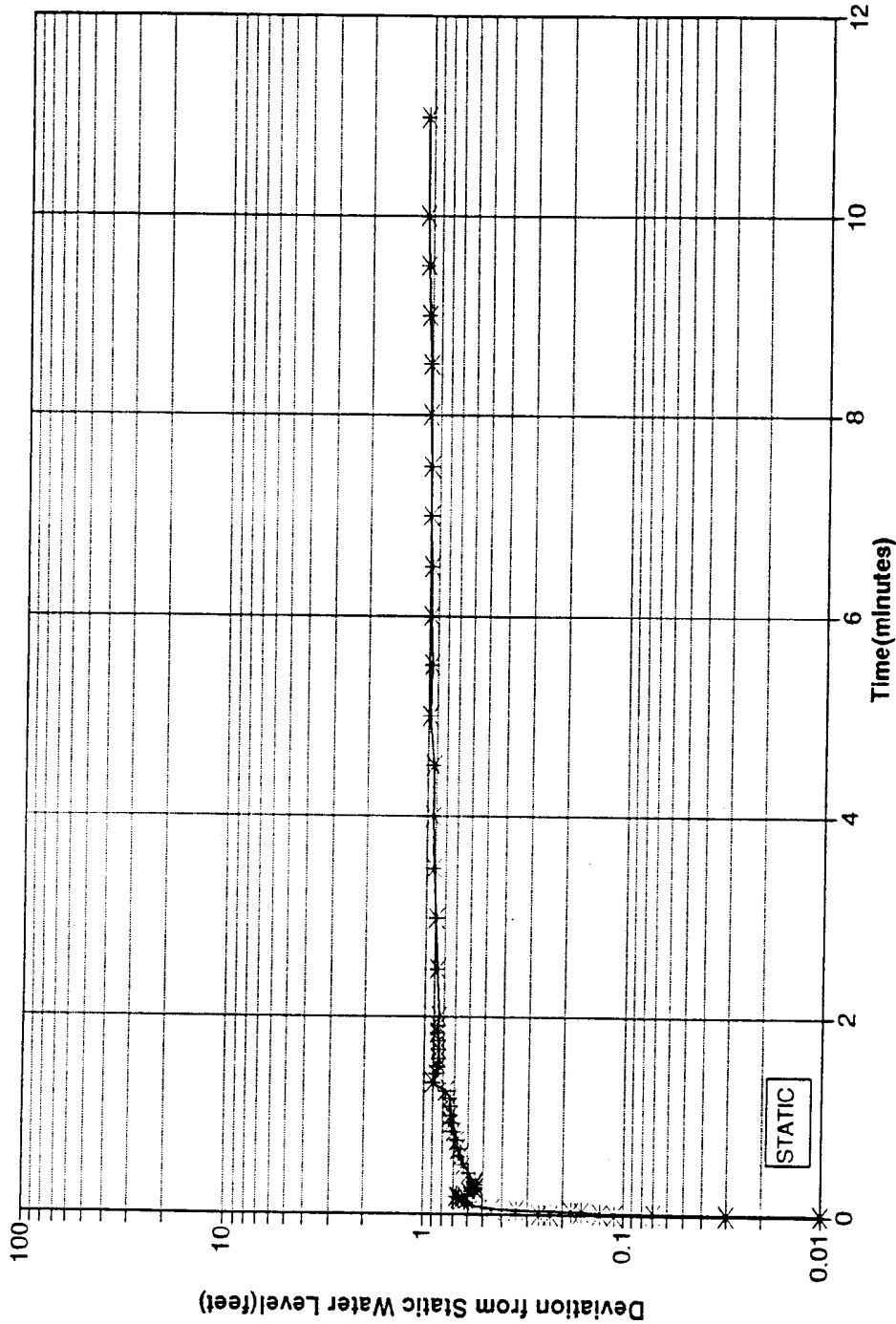
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McKESSON-SANTA FE SPRINGS SB-23 PUMP OUT (PUMPING)



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PLATE

H19

SB-23 PUMP OUT TEST
PUMPING WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

Harding Lawson Associates
Engineering and
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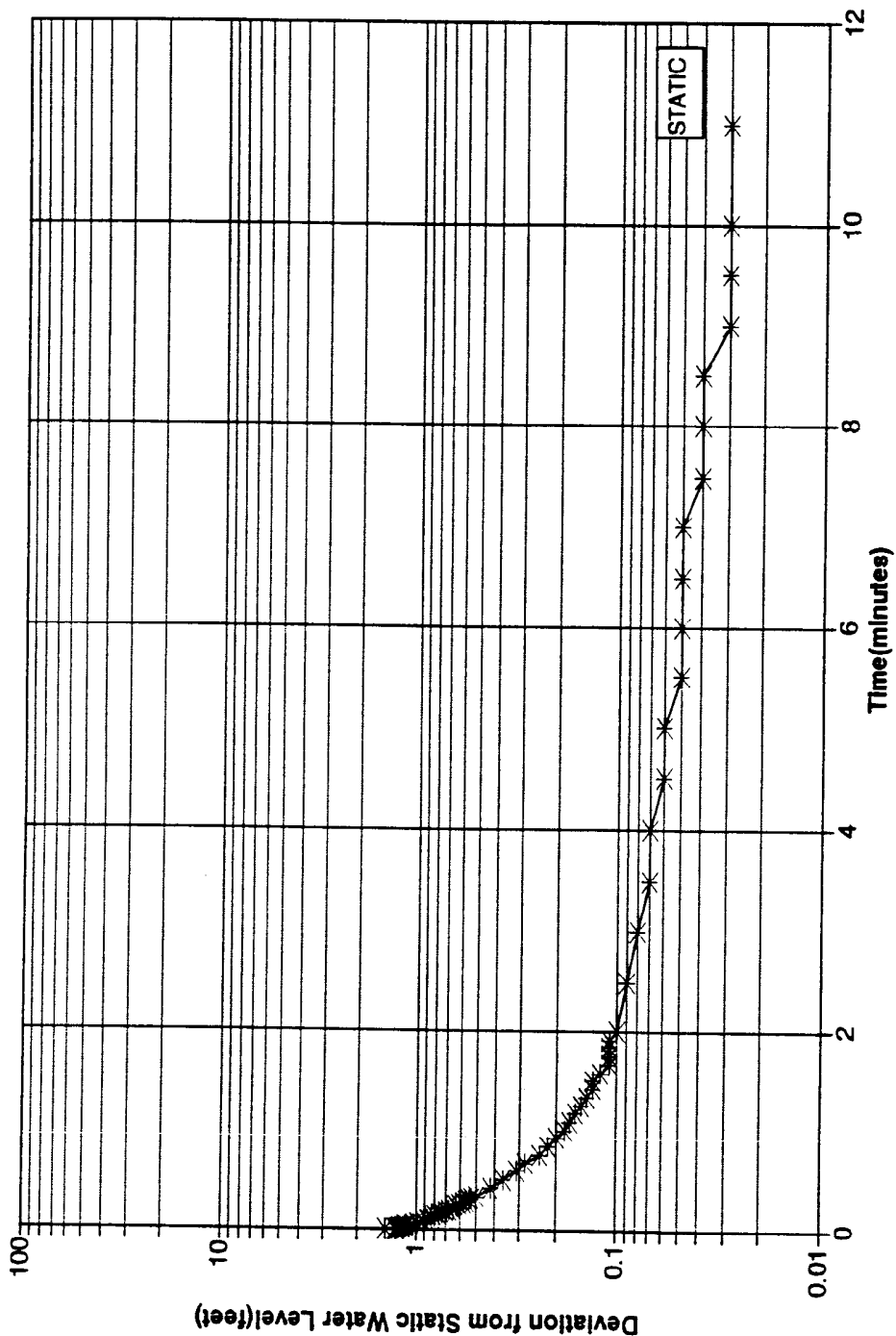
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McKESSON-SANTA FE SPRINGS SB-23 RECOVERY(AFTER PUMPING)



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PLATE

H20

SB-23 PUMP OUT TEST
PUMPING WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

Harding Lawson Associates
Engineering and
Environmental Services



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JTL

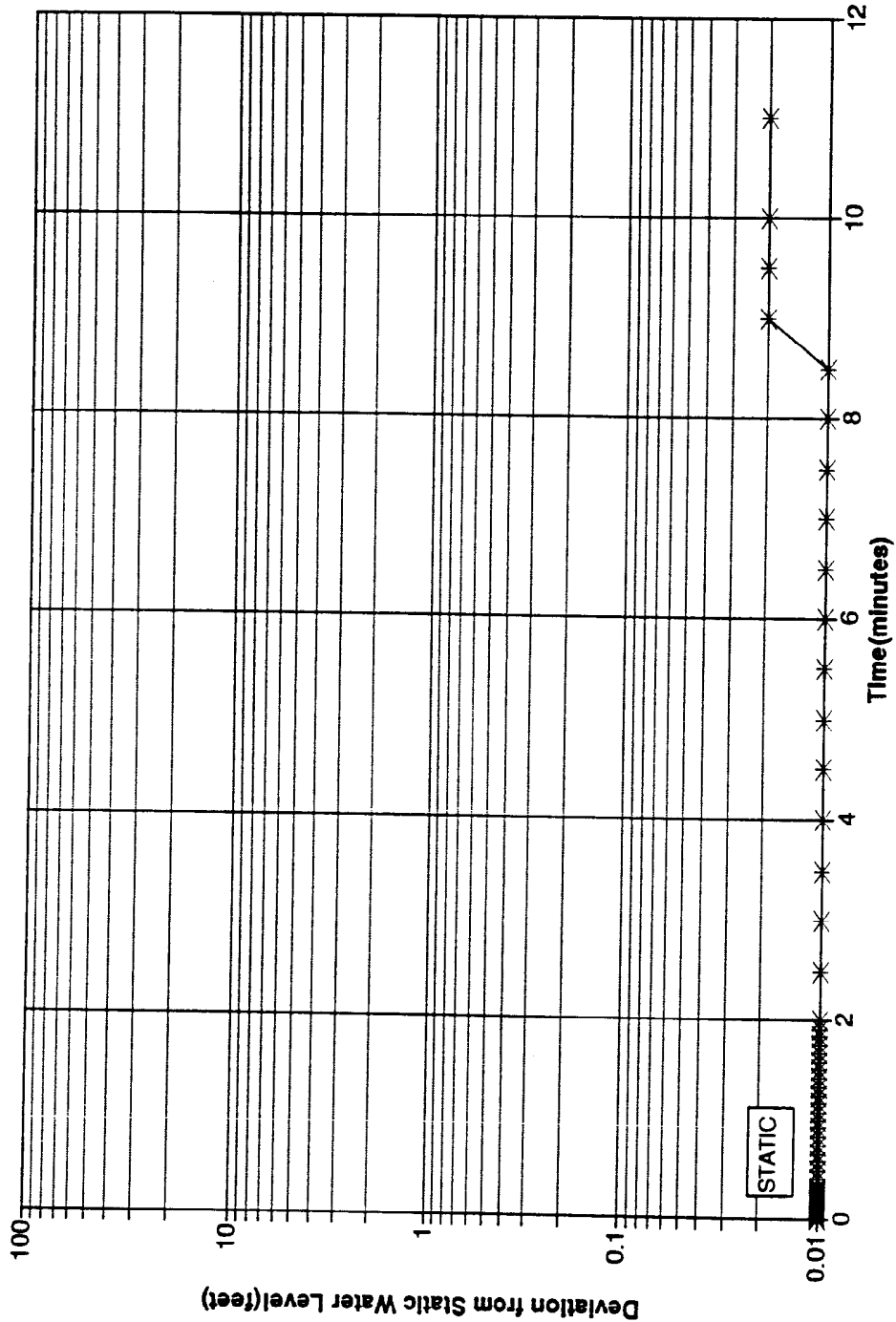
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McKESSON-SANTA FE SPRINGS SB-23A PUMP OUT(PUMPING SB-23)



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PLATE

SB-23A PUMP OUT TEST
OBSERVATION WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

H21

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JTL

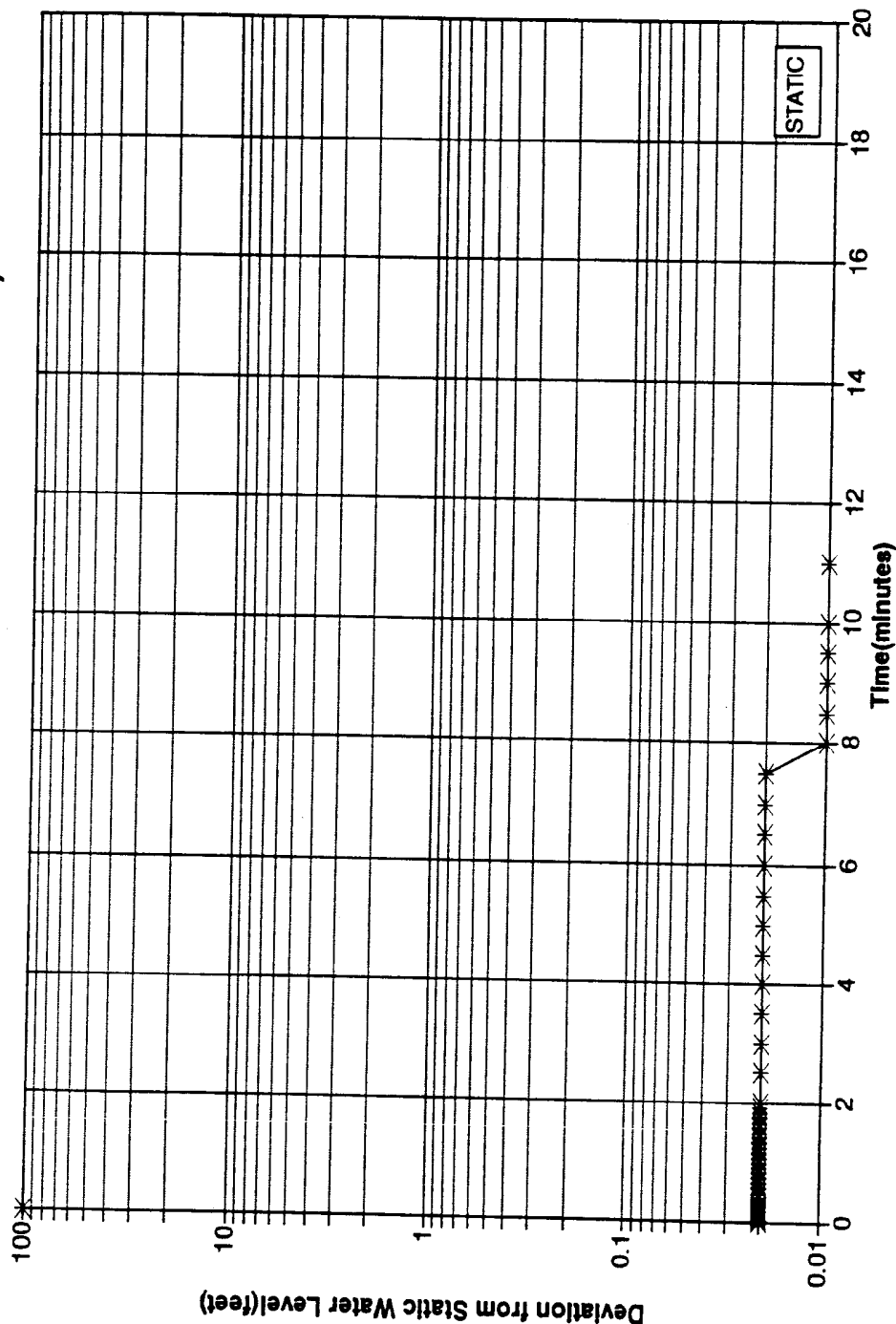
JOB NUMBER
17333,168.11

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McKESSON-SANTA FE SPRINGS SB-23A RECOVERY(AFTER PUMPING SB-23)



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PLATE

H22

SB-23A PUMP OUT TEST
OBSERVATION WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

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JOB NUMBER
17333,168.11

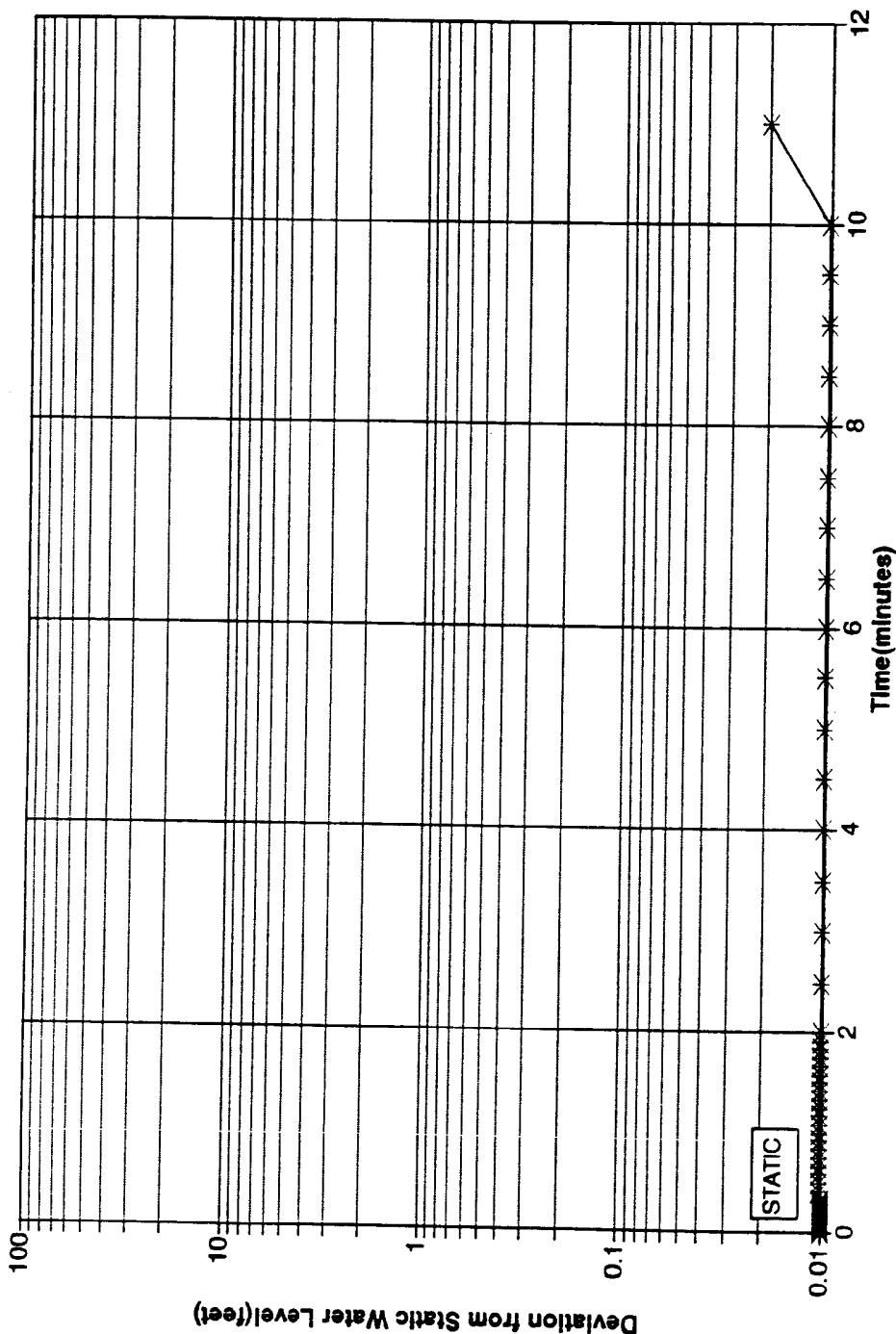
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McKESSON-SANTA FE SPRINGS SB-23B PUMP OUT(PUMPING SB-23)



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PLATE

H23

SB-23B PUMP OUT TEST
OBSERVATION WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

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JOB NUMBER
17333,168.11

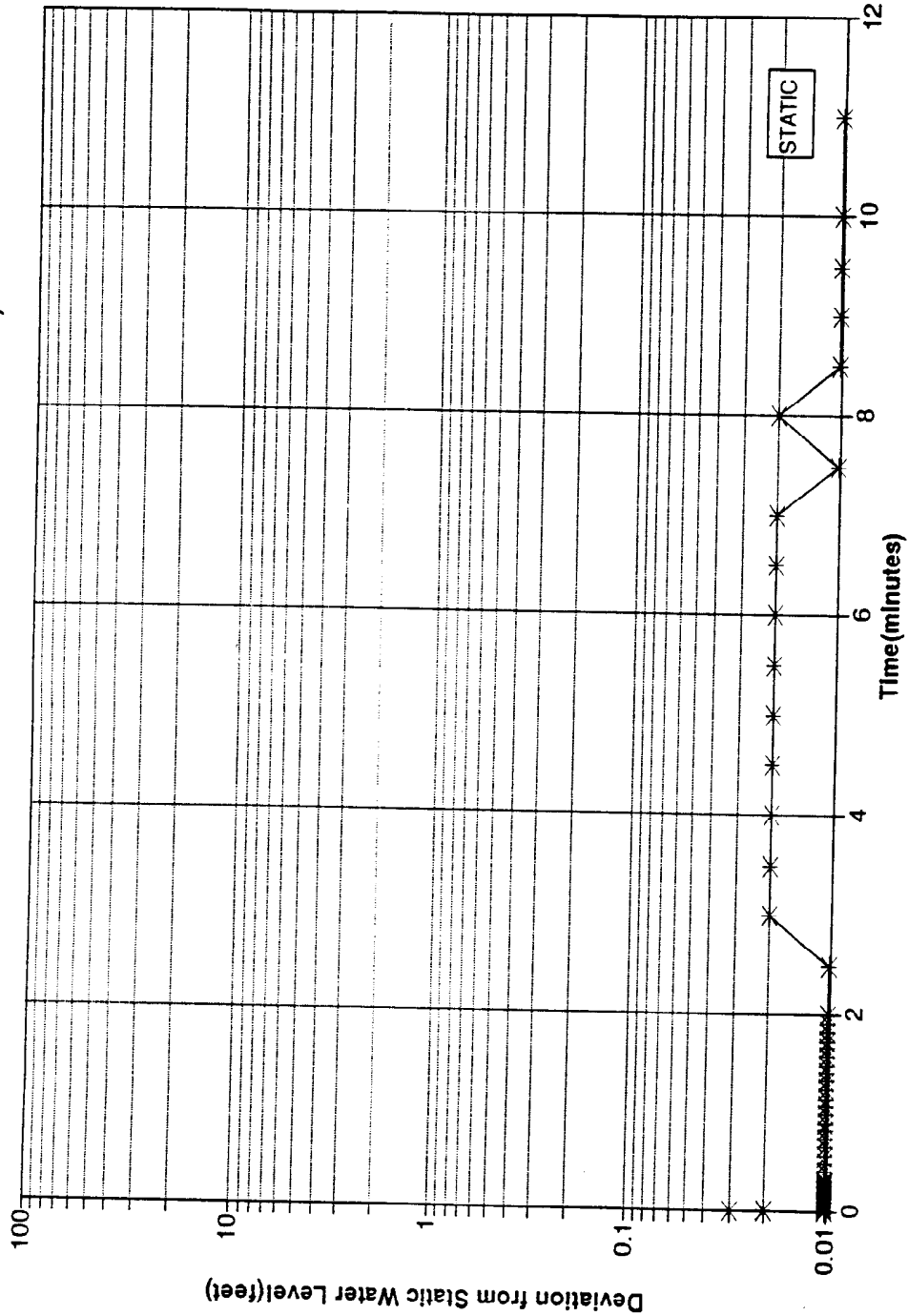
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McKESSON-SANTA FE SPRINGS SB-23B RECOVERY(AFTER PUMPING SB-23)



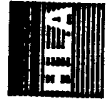
MCK0002935

PLATE

H24

SB-23B PUMP OUT TEST
OBSERVATION WELL HDYROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

Harding Lawson Associates
Engineering and
Environmental Services



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JTL

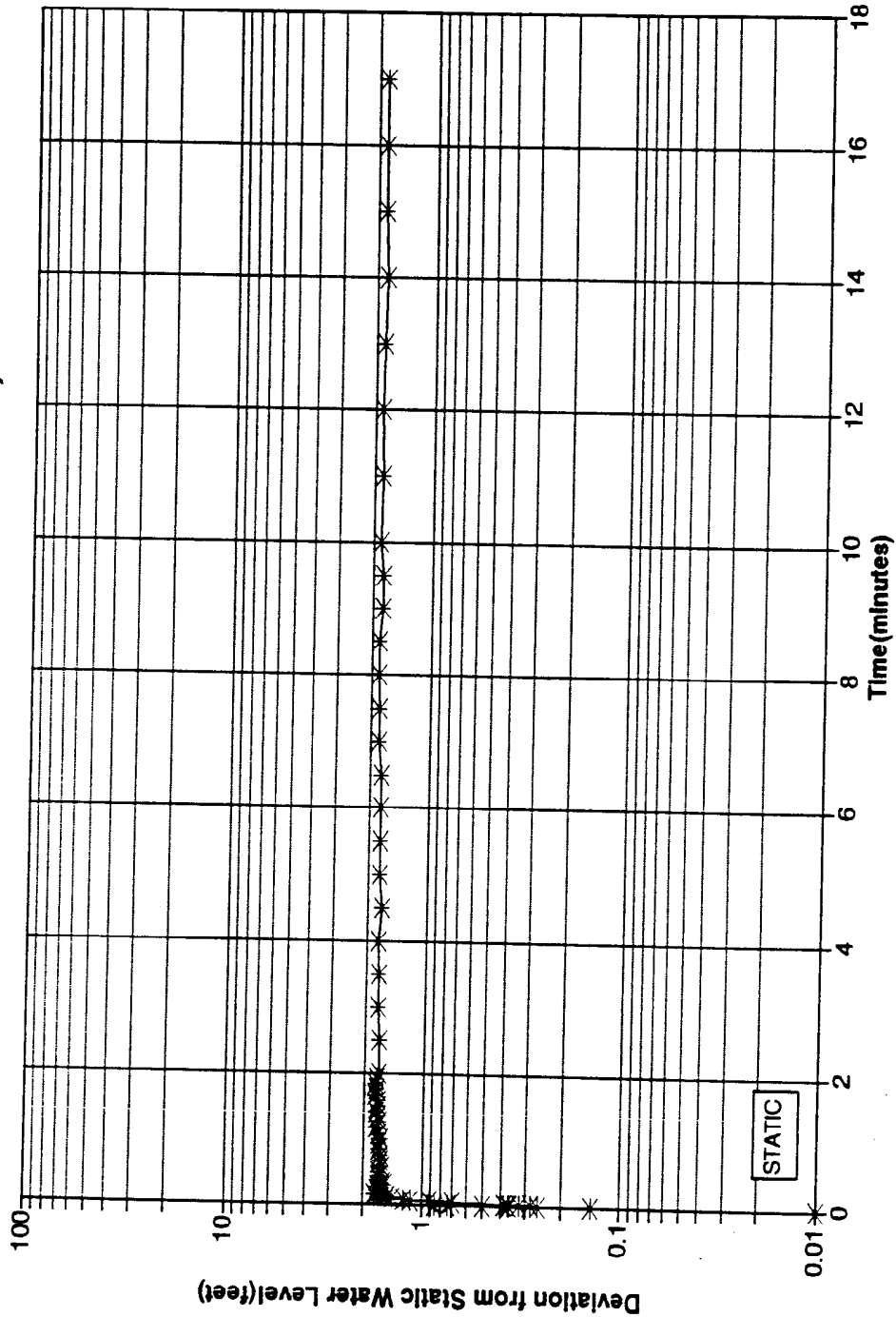
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McKESSON-SANTA FE SPRINGS SB-23A PUMP OUT (PUMPING)



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SB-23A PUMP OUT TEST
PUMPING WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

H25

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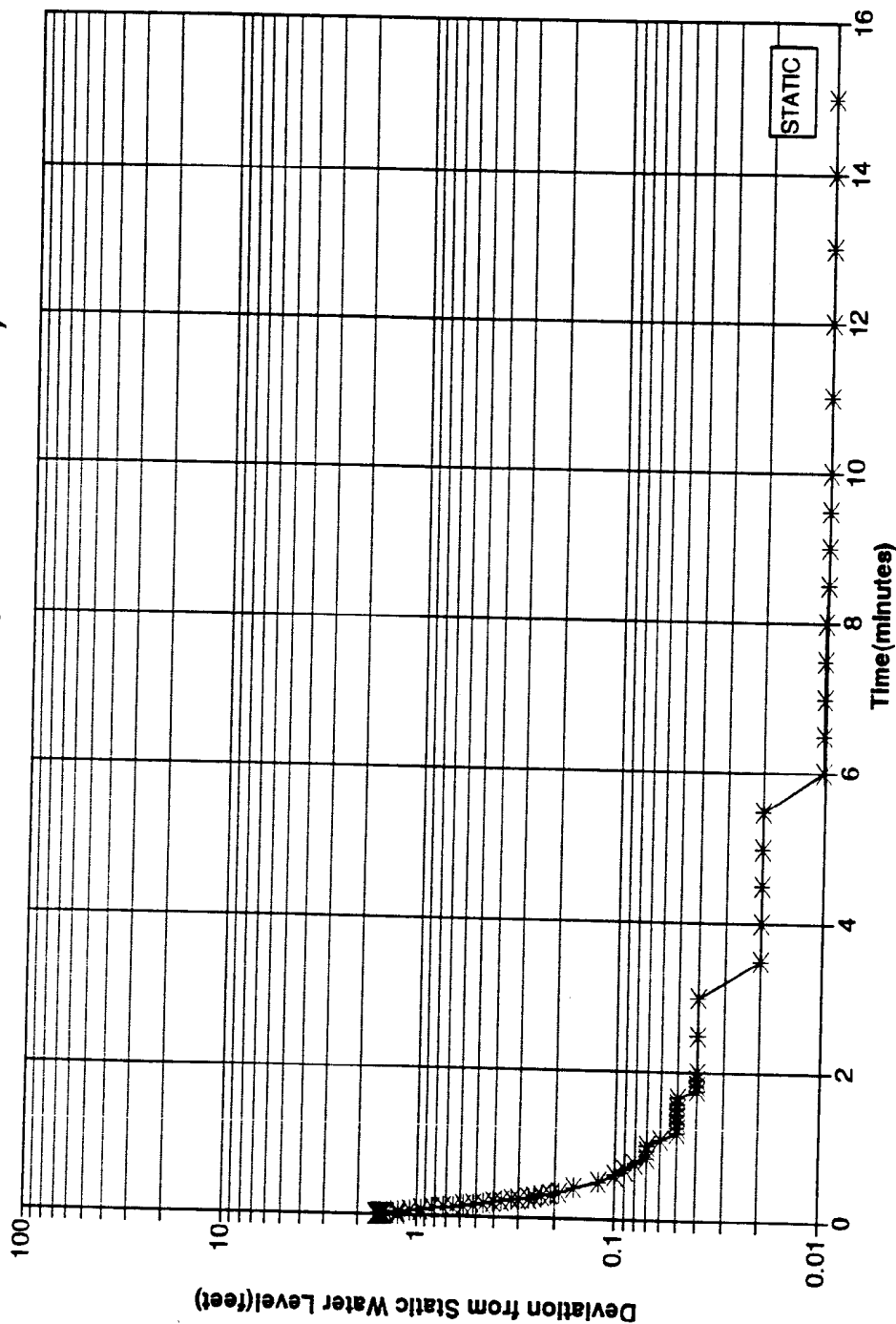
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McKESSON-SANTA FE SPRINGS SB-23A RECOVERY (AFTER PUMPING)



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SB-23A PUMP OUT TEST
PUMPING WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

PLATE

H26

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JTL

JOB NUMBER
17333,168.11

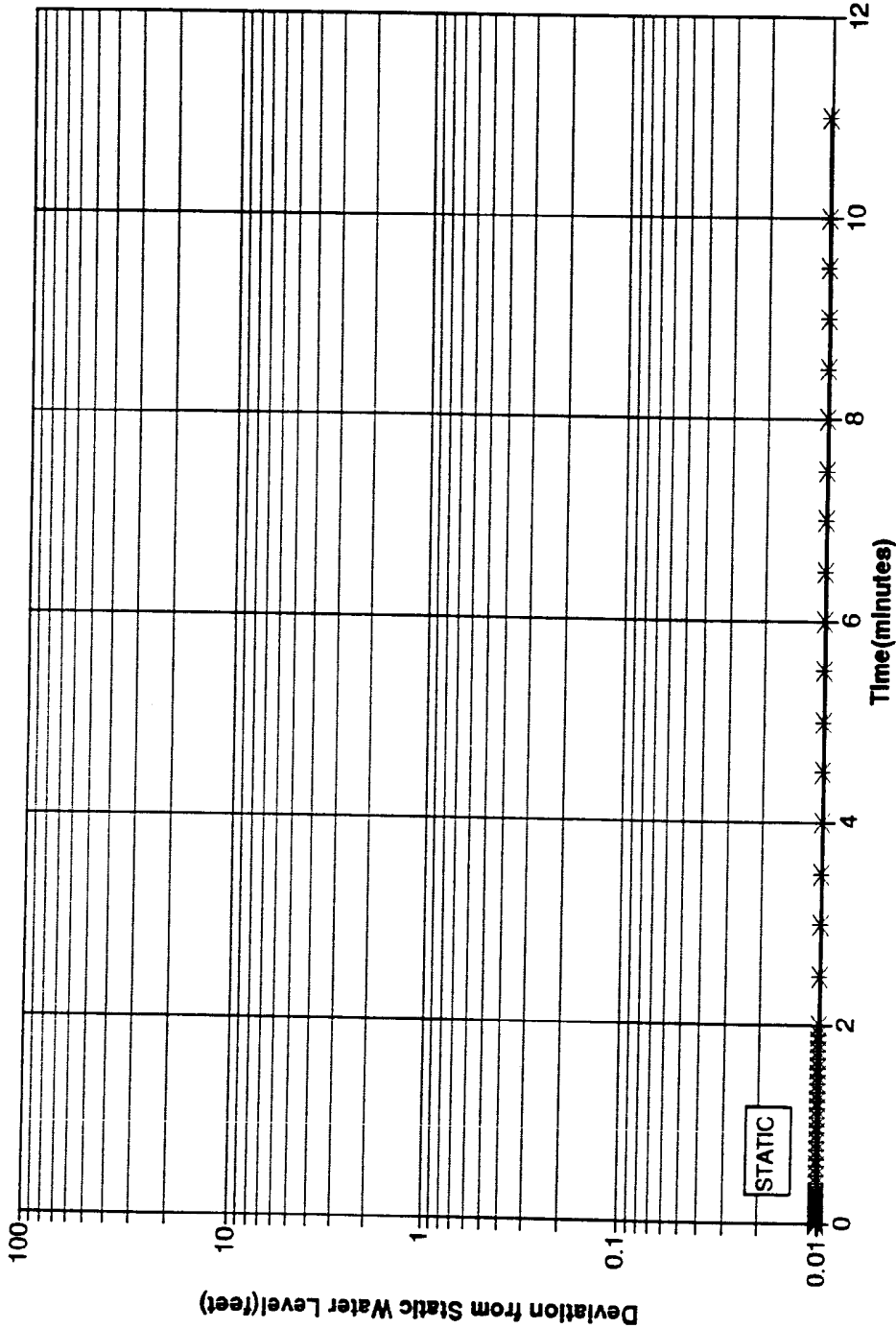
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2/92

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McKESSON-SANTA FE SPRINGS SB-23 PUMP OUT (PUMPING SB-23A)



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PLATE

H27

**SB-23 PUMP OUT TEST
OBSERVATION WELL HDYROGRAPH**
McKesson Corporation Property
Santa Fe Springs, California

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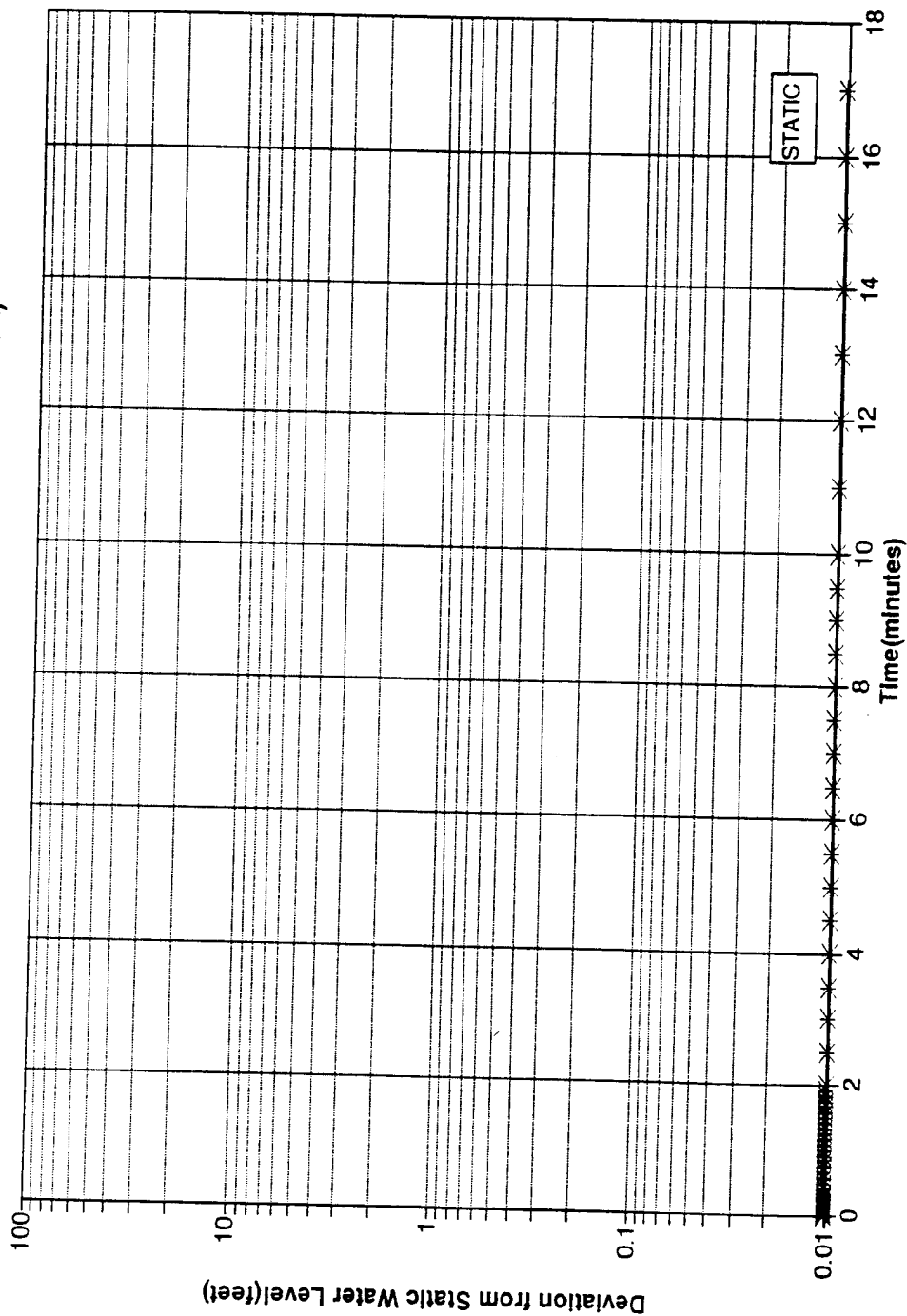
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JOB NUMBER
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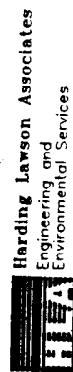
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McKESSON-SANTA FE SPRINGS SB-23 RECOVERY (AFTER PUMPING SB-23A)



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PLATE

SB-23 PUMP OUT TEST
OBSERVATION WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

H28

DRAWN
JTL

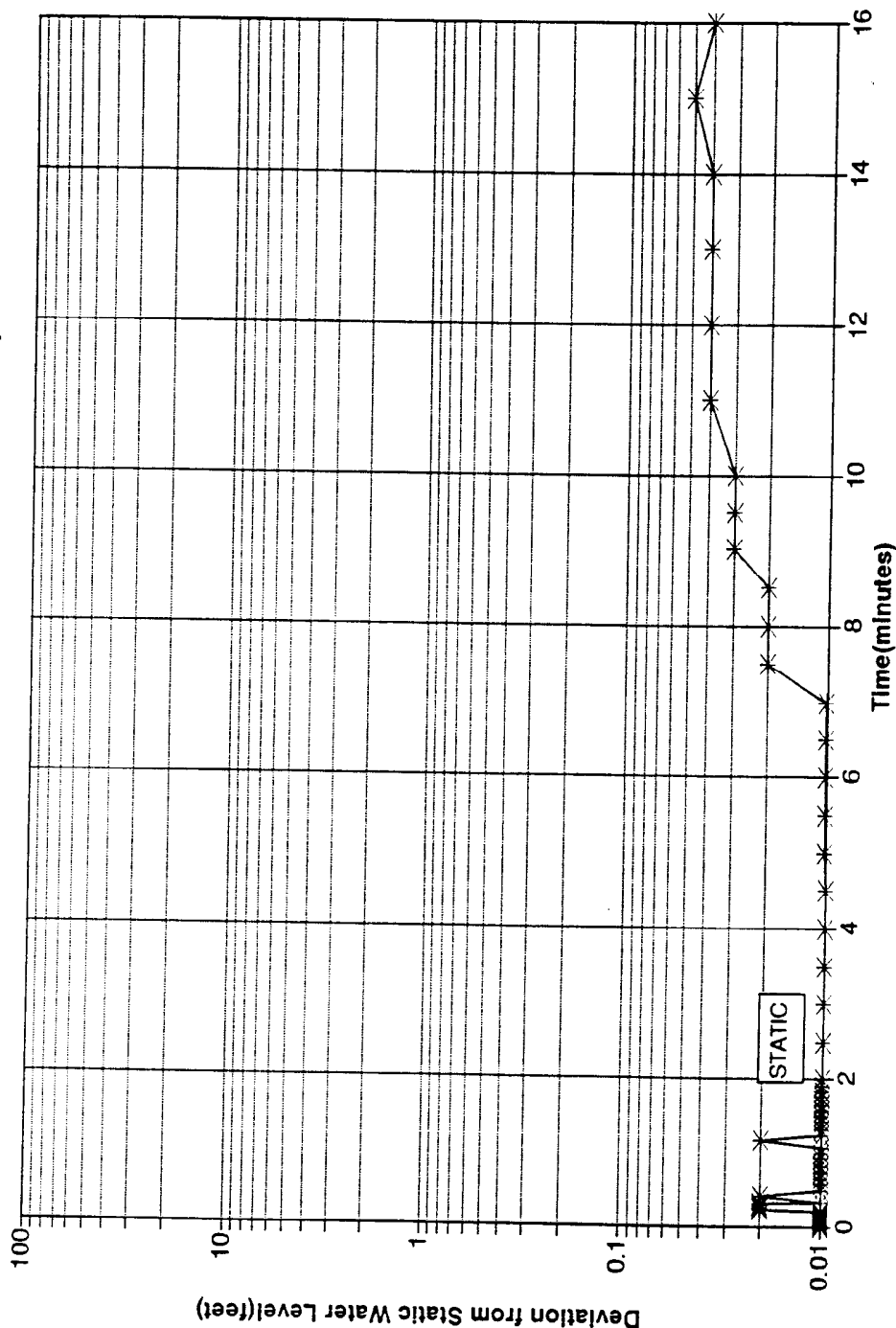
JOB NUMBER
17333,168.11

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DATE
2/92

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McKESSON-SANTA FE SPRINGS SB-23B PUMP OUT(PUMPING SB-23A)



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PLATE

SB-23B PUMP OUT TEST
OBSERVATION WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

H29

DRAWN
JTL

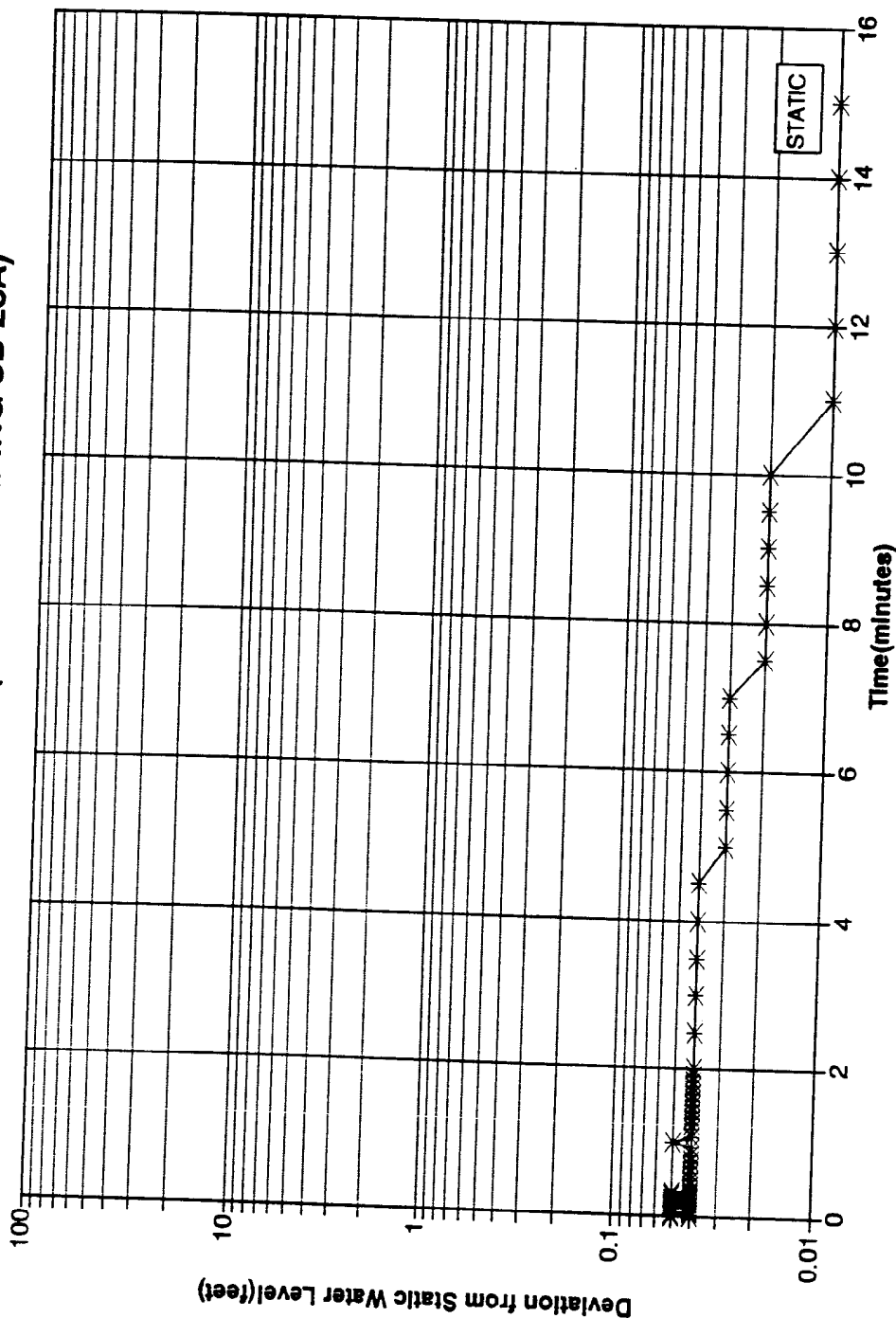
JOB NUMBER
17333,168.11

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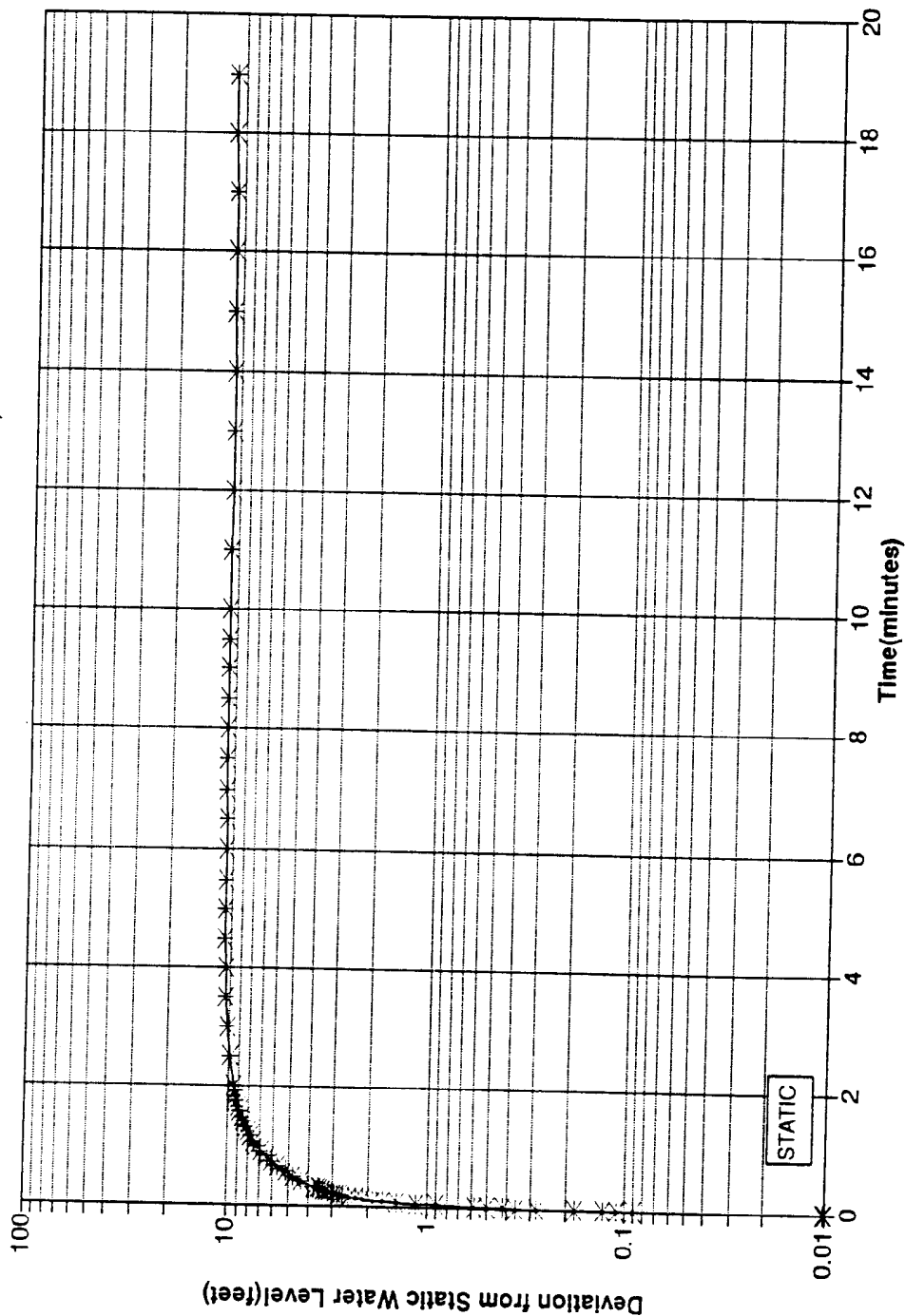
McKESSON-SANTA FE SPRINGS SB-23B RECOVERY(AFTER PUMPING SB-23A)



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| | | | | |
|---|----------------------------|--|------------------|---------------------|
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OBSERVATION WELL HDYROGRAPH
McKesson Corporation Property
Santa Fe Springs, California | | PLATE
H30 |
| DRAWN
JTL | JOB NUMBER
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 | REVISION
2/92 | DATE |

McKESSON-SANTA FE SPRINGS SB-23B PUMP OUT (PUMPING)



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SB-23B PUMP OUT TEST
PUMPING WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

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JOB NUMBER
17333,168.11

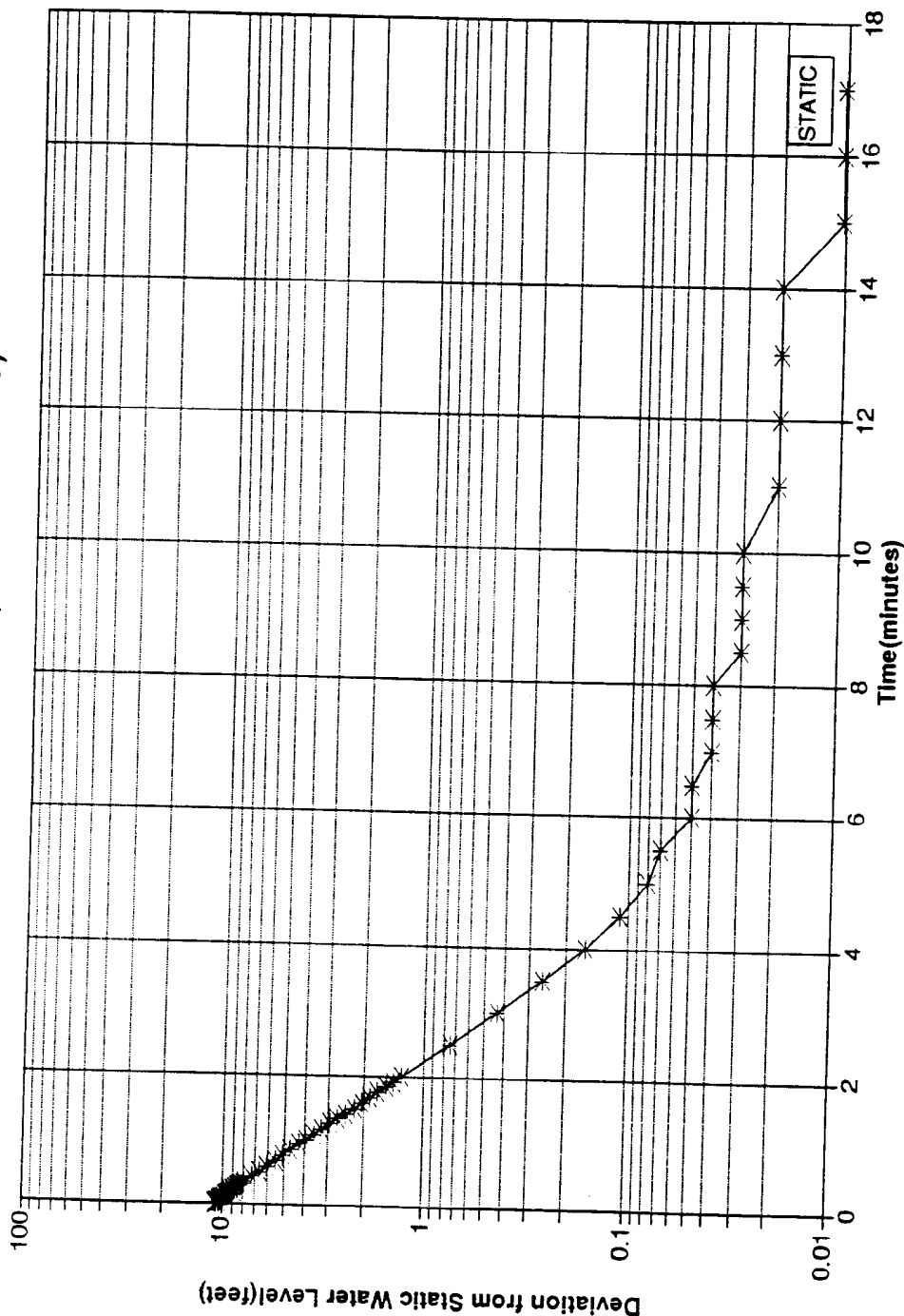
APPROVED
THK

DATE

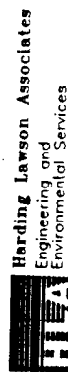
REVISED

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2/92

McKESSON-SANTA FE SPRINGS SB-23B RECOVERY (AFTER PUMPING)



MCK0002943



SB-23B PUMP OUT TEST
PUMPING WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

PLATE

H32

DRAWN
JTL

JOB NUMBER
17333,168.11

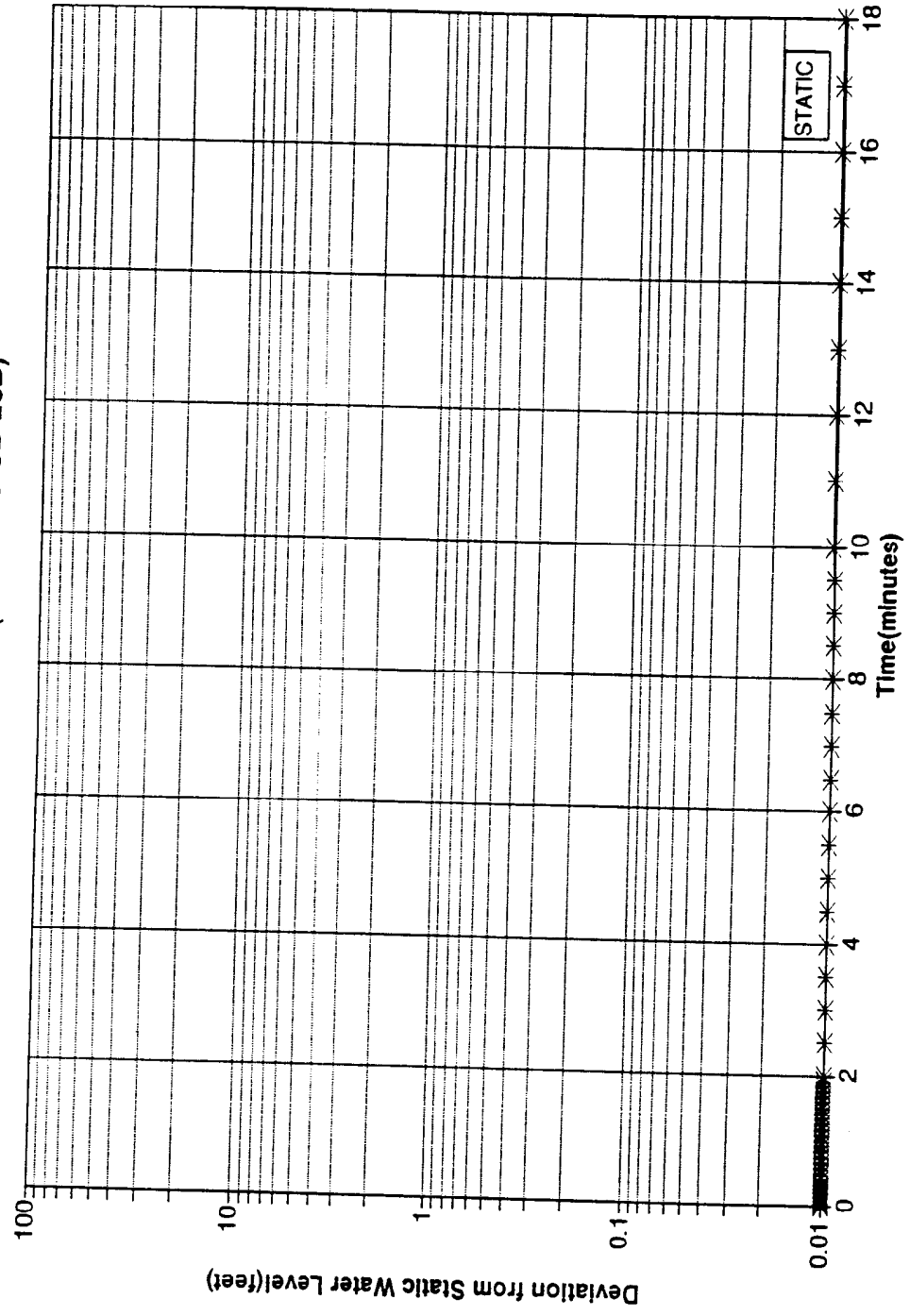
APPROVED
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2/92

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McKESSON-SANTA FE SPRINGS
SB-23 PUMP OUT (PUMPING SB-23B)



MCK0002944

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Engineering and
Environmental Services

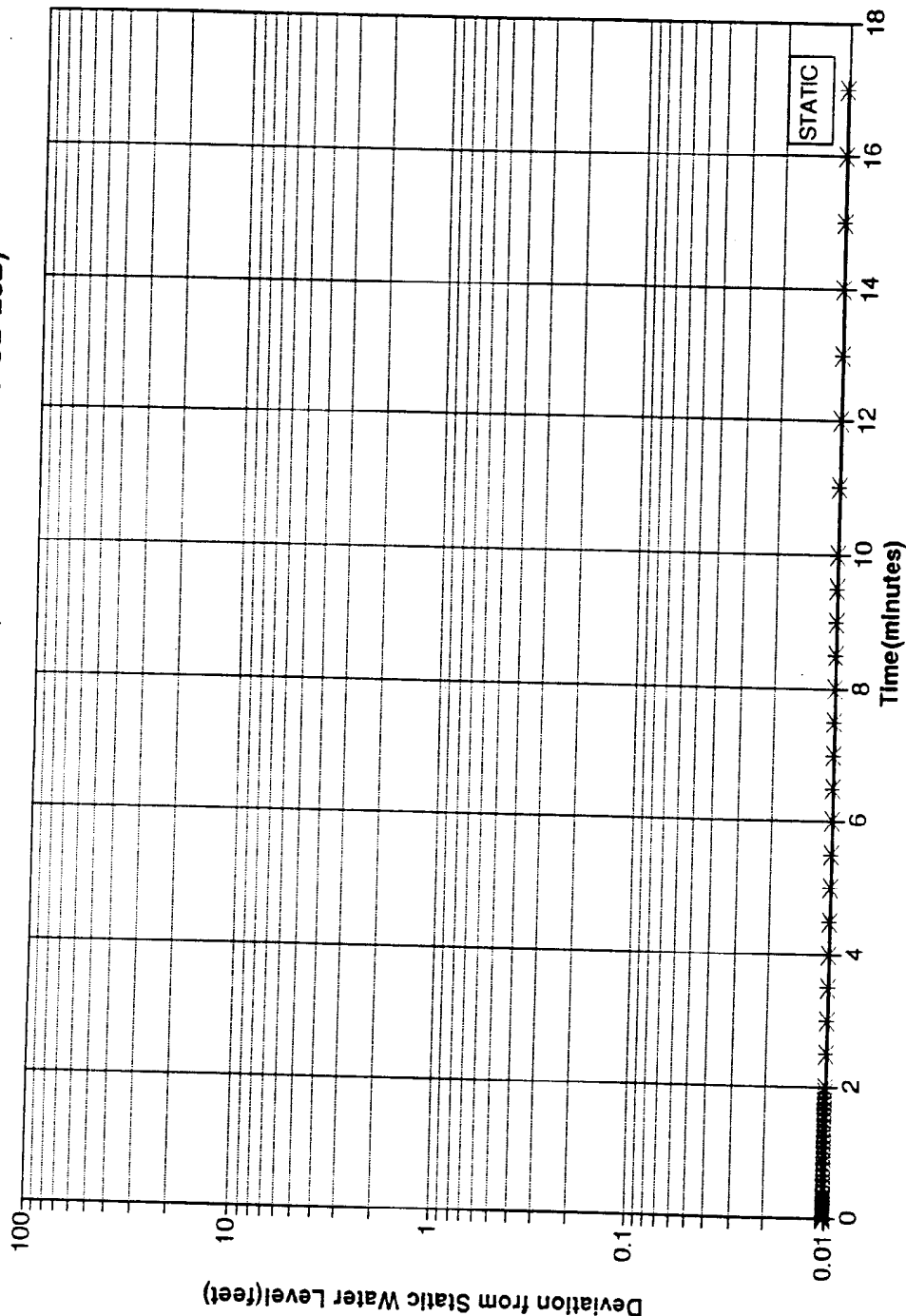
SB-23 PUMP OUT TEST
OBSERVATION WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

PLATE

H33

| | | | | | |
|--------------|----------------------------|-----------------------|--------------|---------|------|
| DRAWN
JTL | JOB NUMBER
17333,168.11 | APPROVED
<i>HL</i> | DATE
2/92 | REVISED | DATE |
|--------------|----------------------------|-----------------------|--------------|---------|------|

McKESSON-SANTA FE SPRINGS SB-23 RECOVERY (AFTER PUMPING SB-23B)



MCK0002945



Harding Lawson Associates
Engineering and
Environmental Services

SB-23 PUMP OUT TEST
OBSERVATION WELL HDYROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

PLATE

H34

DRAWN

JTL

JOB NUMBER

17333,168.11

APPROVED

JTL

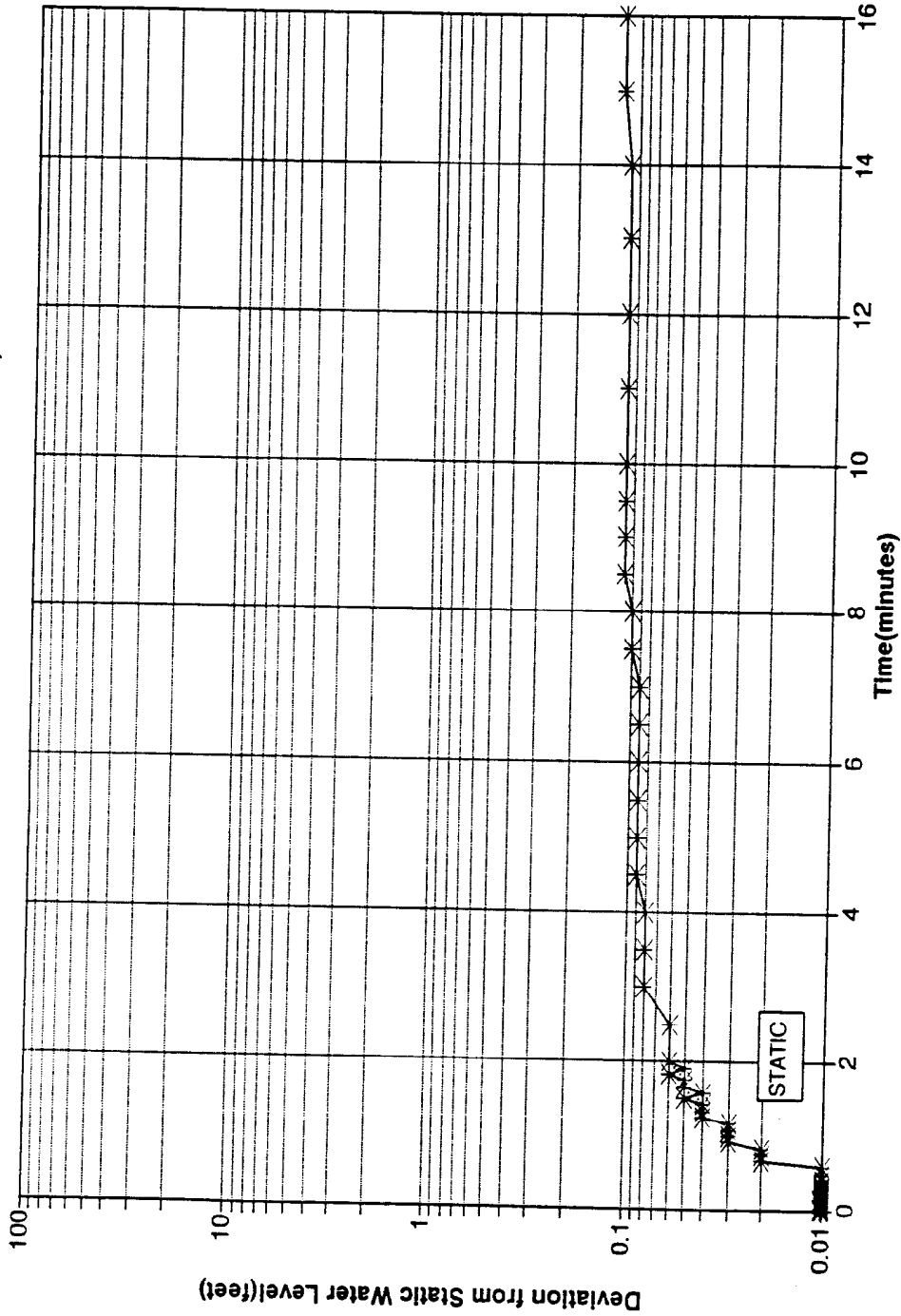
DATE

2/92

REVISED

DATE

**McKESSON-SANTA FE SPRINGS
SB-23A PUMP OUT (PUMPING SB-23B)**



MCK0002946

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Engineering and
Environmental Services

**SB-23A PUMP OUT TEST
OBSERVATION WELL HYDROGRAPH**
McKesson Corporation Property
Santa Fe Springs, California

PLATE

H35

DRAWN
JTL

JOB NUMBER
17333,168.11

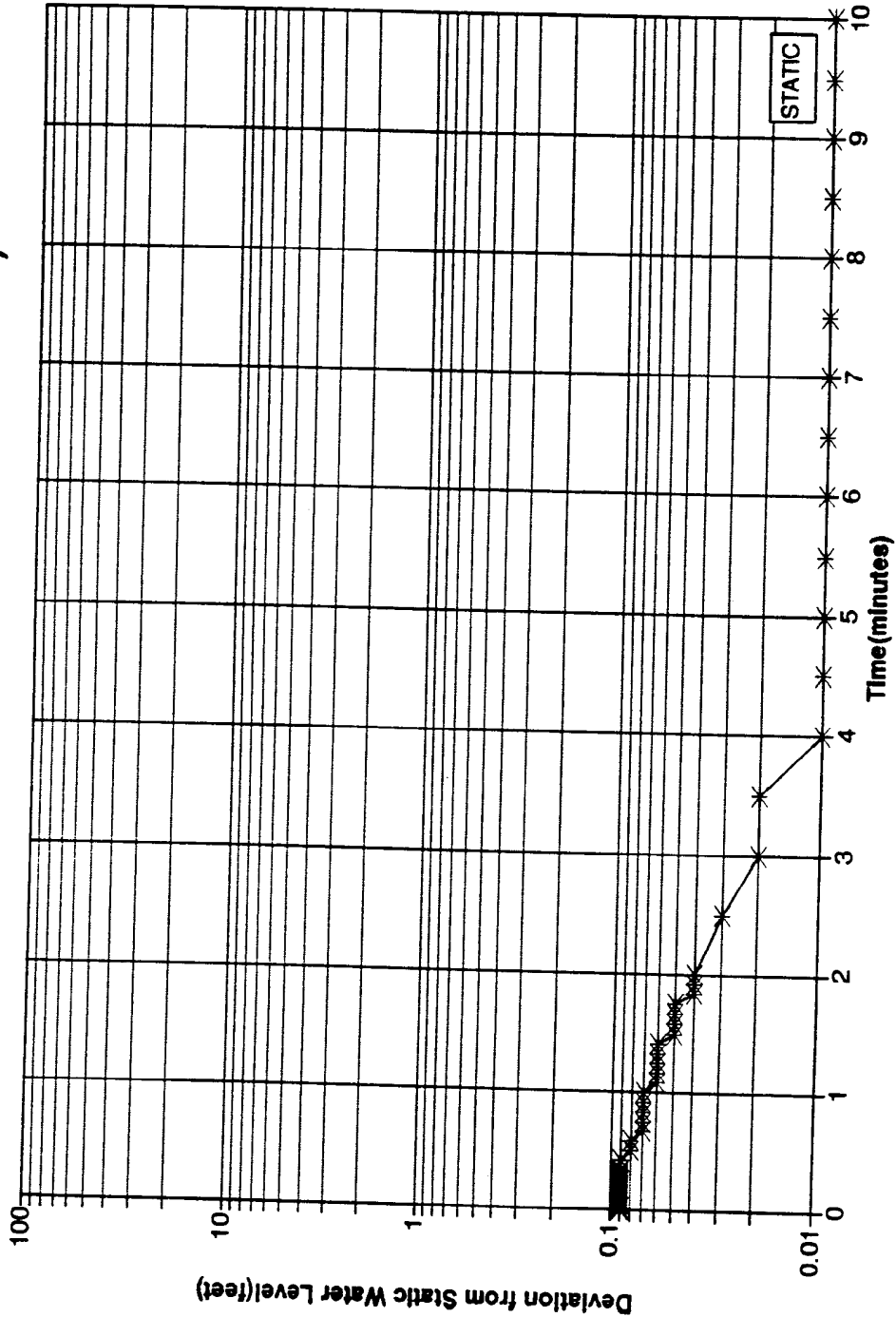
REVISED

DATE

2/92

DATE

McKESSON-SANTA FE SPRINGS SB-23A RECOVERY(AFTER PUMPING SB-23B)



MCK0002947

HLEA
Harding Lawson Associates
Engineering and
Environmental Services

SB-23A PUMP OUT TEST
OBSERVATION WELL HYDROGRAPH
McKesson Corporation Property
Santa Fe Springs, California

PLATE

H36

DRAWN JTL JOB NUMBER 17333,168.11 APPROVED *MLC* DATE 2/92

Table H1. Summary of Slug Test Data - Slug in

| Time From
Start of
Test
(Minutes) | MW-1
*Change
In Water
Level
(feet) | MW-2
*Change
In Water
Level
(feet) | MW-3
*Change
In Water
Level
(feet) | MW-32
*Change
In Water
Level
(feet) |
|--|--|--|--|---|
| Static Water Level | 47.95 | 44.92 | 48.62 | 33.46 |
| Date/Time | 8-16-90/09:30 | 8-16-90/10:50 | 8-15-90/11:41 | 8-16-90/16:00 |
| 0 | 0.01 | 0.01 | 0 | 0.7 |
| 0.0033 | 0.01 | 0 | 0.01 | 0.7 |
| 0.0066 | 0.01 | 0 | 1.86 | 0.69 |
| 0.0099 | 0.01 | 0 | 1.88 | 0.69 |
| 0.0133 | 0.01 | 0 | 0.98 | 0.7 |
| 0.0166 | 0.01 | 0.01 | 1.17 | 0.69 |
| 0.02 | 0.01 | 0 | 1.42 | 0.7 |
| 0.0233 | 0.01 | 0.01 | 1.83 | 0.69 |
| 0.0266 | 0.01 | 0.01 | 2.18 | 0.7 |
| 0.03 | 1.13 | 0 | 1.38 | 0.7 |
| 0.0333 | 1.04 | 0.01 | 0.53 | 0.69 |
| 0.05 | 1.75 | 0.01 | 1.14 | 0.7 |
| 0.0666 | 1.44 | 0.09 | 3.09 | 0.69 |
| 0.0833 | 1.35 | 0.09 | 1.36 | 0.69 |
| 0.1 | 0.51 | 0.09 | 1.39 | 0.69 |
| 0.1166 | 0.76 | 0.07 | 0.72 | 0.69 |
| 0.1333 | 0.63 | 0.09 | 0.5 | 0.01 |
| 0.15 | 0.52 | 0.09 | 0.25 | 0.19 |
| 0.1666 | 0.42 | 0.09 | 0.08 | 0.82 |
| 0.1833 | 0.34 | 0.09 | 0.01 | 1.91 |
| 0.2 | 0.28 | 0.09 | 0.03 | 0.01 |
| 0.2166 | 0.23 | 0.09 | 0.04 | 0.16 |
| 0.2333 | 0.19 | 0.09 | 0.04 | 0.19 |
| 0.25 | 0.16 | 0.09 | 0.04 | 0.23 |
| 0.2666 | 0.13 | 0.09 | 0.04 | 0.23 |
| 0.2833 | 0.11 | 0.09 | 0.04 | 0.23 |
| 0.3 | 0.09 | 0.09 | 0.04 | 0.22 |
| 0.3166 | 0.08 | 0.09 | 0.04 | 0.22 |
| 0.3333 | 0.07 | 0.09 | 0.04 | 0.22 |
| 0.4167 | 0.04 | 0.09 | 0.03 | 0.22 |
| 0.5 | 0.03 | 0.09 | 0.02 | 0.22 |
| 0.5833 | 0.02 | 0.08 | 0.02 | 0.21 |
| 0.6667 | 0.01 | 0.05 | 0.02 | 0.21 |
| 0.75 | 0.01 | 0.03 | 0.01 | 0.21 |
| 0.8333 | 0 | 0.01 | 0.01 | 0.21 |
| 0.9167 | 0 | 0.01 | 0.01 | 0.2 |
| 1 | 0 | 0.01 | 0.02 | 0.21 |

* Water level deviation from static as measured with a Hermit Data Logger.
 ND indicates no data available.

MCK0002948

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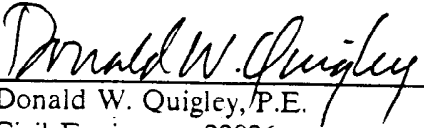
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Attention: Mr. Andrew C. Lazzaretto

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Civil Engineer - 22026

TH/TAK/BS/DWQ/lf

MCK0002949